THE ALBERTA JOURNAL OF EDUCATIONAL RESEARCH

VOLUME XXXV NUMBER 3 SEPTEMBER 1989

PUBLISHED BY
THE UNIVERSITY OF ALBERTA • EDMONTON

THE ALBERTA JOURNAL OF EDUCATIONAL RESEARCH

Published in March, June, September, and December
by the Faculty of Education, University of Alberta

A quarterly journal devoted to the dissemination, criticism, interpretation, and encouragement of all forms of systematic enquiry into education and fields related to or associated with education.

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AJER gratefully acknowledges support from the Social Sciences and Humanities Research Council of Canada and from the Alberta Advisory Committee for Educational Studies.

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Address all communications and manuscript submissions to *The Alberta Journal of Educational Research*, Faculty of Education, Publication Services, 4-116 Education North, University of Alberta, Edmonton, Alberta, Canada, T6G 2G5.

SECOND CLASS MAIL REGISTRATION NUMBER 1436

Faculty of Education
University of Alberta

ISSN 0002-4805

The Alberta Journal of Educational Research

Volume XXXV, Number 3 *September 1989*

CONTENTS

EDITORIAL:
Stanley Charles Tremaine Clarke (1912-1989) 187
V.R. Nyberg

Denominational Cause and Employment
in Religious Schools 189
S.B. Lawton and R. Wignall

Principals' Evaluation of Teachers in a
British Columbia School District: Are the Reports
Professional or Bureaucratic Documents? 196
I.E. Housego

Cognitive Flexibility and Inflexibility
in Principals' Problem Solving 217
M. Stager and K.A. Leithwood

The Impact of Family Form on
Perceptions of Children's Functioning 237
D.L. Mensink and D.D. Sawatzky

Program Advice Given to Canadian Adolescents:
Effects of Student Gender, Ethnicity,
and Achievement 255
E.M. Stewart, N.L. Hutchinson,
P. Hemingway, and F. Bessai

The Alberta Journal of Educational Research *Vol. XXXV, No. 3, September 1989, 187-188*

EDITORIAL

Readers of *AJER* will be saddened to hear of the recent death of Dr. S.C.T. (Stan) Clarke, who was a frequent contributor to and longtime supporter of the journal. In place of an editorial, Dr. Vern Nyberg kindly consented to write a brief note on Dr. Clarke's active and productive life in education.

T.O.M.

Stanley Charles Tremaine Clarke (1912-1989)

The death of Stanley C.T. Clarke on Monday, May 22 in the Royal Alexandra Hospital in Edmonton ended a long and distinguished career in education. This career spanned a full half century, and for much of that time he was one of the better known and respected educators in the province of Alberta.

Clarke was born in Scrooby, England, a town situated a few miles east of Sheffield. In 1918, at the age of six years, he moved with his parents to a farm near Castor, Alberta. He attended high school in Castor, Alliance, and Alberta College, Edmonton, then proceeded to the University of Alberta where he completed his BA and MA degrees. Next he served as principal of Two Hills school (four years) and principal of Carstairs school (two years). In 1936 he married Eleanor Coote, who died two years ago. He is survived by two sons, William and Philip of Edmonton, a daughter, Susan of Anahim Lake, B.C., and four grandchildren.

From 1943 to 1945 Clarke was a navigation instructor in the RCAF with a rank of flying officer. After his release from the air force he completed his MEd degree at the U of A, after which he was engaged as a teacher in the prematriculation school in Calgary, an institution where war veterans could upgrade their education. He left this position to attend Stanford University, and on completion of his doctorate in education was appointed Acting Head, Department of Educational Psychology at California State Polytechnic College.

In 1950 Clarke returned to Canada and joined the Department of Educational Psychology in the Faculty of Education at the University of Alberta. In 1959 he commenced a nine-year term as Executive Secretary of the Alberta Teachers' Association, after which he returned to the U of A as Director of Special Sessions. In 1977 he retired and was granted Professor Emeritus status.

After his retirement, Clarke continued to offer a course, Psychology of Learning and Teaching at the Adult Level, on a regular basis for 10 years. He was active as a researcher in education until his death.

One of Dr. Clarke's many special contributions to education was his dedicated service to the Alberta Advisory Committee on Educational Research (AACER), and to its successor, the Alberta Advisory Committee for

Educational Studies (AACES), which to this day is one of the primary supporters of *AJER*. He was the first secretary of AACER, and later the assistant director. For 10 years he was a member representing the Alberta Teachers' Association, and then, following his return to the University of Alberta staff, served as executive secretary until his retirement. Following his retirement, he was an honorary member of the committee.

Publications by Clarke, besides many articles in *AJER*, include two textbooks, *Youth of Tomorrow*, and *The Modern World of Work* (with T.W. Woodsworth); and three larger reports on aspects of education in Alberta, *Classroom Discipline, The Goals of Teacher Education* (with H.T. Coutts), and *The Future of Teacher Education* (with H.T. Coutts). His final publication for AACES, entitled *The Development of the Alberta Advisory Committee for Educational Studies: 1954-1984*, was distributed in 1986. His easy writing style caused him to be in demand by various organizations when special reports and historical accounts were needed.

Awards related to education that were given to Clarke included: Kappan of the Year by the University of Alberta chapter of Phi Delta Kappa; Honorary Life Membership in the Alberta Teachers' Association; Honorary Life Membership in the Canadian Education Association; and the Canadian Teachers' Federation Special Recognition award.

Above all, Clarke was an educator. Despite achieving positions of influence and prestige, his primary concern was the classroom teacher whose task was the day-to-day delivery of education to the young people of the nation.

Vern R. Nyberg

The Alberta Journal of Educational Research *Vol. XXXV, No. 3, September 1989, 189-195*

STEPHEN B. LAWTON

and

ROULEEN WIGNALL

Ontario Institute for Studies in Education

Denominational Cause and Employment in Religious Schools

The topic of this article is the right of Roman Catholic and other denominational schools in Canada to discriminate on the basis of creed in the employment of teachers and other personnel. Three major questions are asked: What is denominational cause? How do statutes related to collective bargaining and the resolution of disputes affect denominational rights? How are different groups of employees affected by the protection of denominational rights? Tentative conclusions are drawn, although the situation is in a state of flux. Implications are suggested for both denominational and nondenominational schools.

This article examines the rights of Roman Catholic and other denominational schools in Canada to discriminate on the basis of creed in the employment of teachers and other personnel. The research is based both on an analysis of documentary evidence, including books, reports, laws, regulations, memoranda, and judicial decisions, and on interviews with officials in a number of provinces. Most of the court cases which were identified related to Roman Catholic schools, but these cases clearly raise questions concerning other denominational schools, privately or publicly financed, and may in time have implications for public nondenominational schools as well.

Background

Provision for the operation of denominational schools exists either formally or informally across Canada (Lawton, 1987). Publicly supported schools specifically for Roman Catholics are formally recognized in Ontario, Quebec, Alberta, Saskatchewan, Newfoundland, the Northwest Territories, and the Yukon. Informal accommodations have been made within the public system in New Brunswick, Nova Scotia, Prince Edward Island, and Manitoba for such schools, though this tradition has weakened in recent years. British Columbia makes no provision for separate schools for Roman Catholics within the public system: Catholic schools there exist as private institutions and receive (since 1977) some direct support from the government. Private denominational schools operate in most provinces and receive

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government support to varying degrees in Quebec, Manitoba, Saskatchewan, Alberta, and British Columbia.

The existence of denominational schools raises a fundamental question: To what degree can denominational schools employ discriminating practices in order to maintain their denominational character? Increased public funding of denominational schools has drawn more attention to this question. The Canadian Charter of Rights and Freedoms, ensconced in the Constitution Act (1982), has further heightened the issue. The boundaries on acceptable practices are now in the process of definition through the courts.

At present, the rights of employees in separate and denominational schools and the authority of trustees for these schools over their employees are matters that are by no means well defined in legal terms, though it is clear that, under the law, separate and denominational schools differ from nondenominational public schools insofar as the employment of staff is concerned.

For any given province, at least six sets of "laws" are relevant to the issue: The Constitution Act (1867, formerly the British North America Act, 1867); the Constitution Act (1982) including the Charter of Rights and Freedoms; provincial human rights codes; provincial acts governing the settling of disputes among educational employees; provincial or local collective agreements; and school board bylaws and regulations. Any one or all of these may come into play for a specific situation.

The Issues

At the risk of oversimplifying, three major questions are at issue in the relevant cases that have gone before the courts: (a) What is *denominational cause*? (b) How do statutes related to collective bargaining and the resolution of disputes affect *denominational rights*? and (c) How are different groups of employees affected by the protection of *denominational rights*?

Denominational Cause

Denominational cause is the term used to describe the practice of discrimination in employment practices which is justified on the basis that particular denominational attributes are essential for the performance of a specific job. In order to maintain the religious character of certain organizations, their governing bodies claim the right to hire and dismiss employees on the basis of the candidates' religion. For example, an Anglican church may discriminate against non-Anglicans and employ only Anglican priests.

The notion that employees may be dismissed for *just cause* is often found in negotiated contracts and education acts (MacKay, 1984). The conclusion that actions related to the denominational nature of a religious school qualify as just cause seems a logical one. This conclusion, however, has not been easy to apply. Although a number of court cases involving denominational and separate schools have been decided on the basis of whether a given reaction, such as the dismissal of an employee who has behaved in a particular way, is acceptable given the religious character of the school, the particular behaviors that can justify dismissal are not fully spelled out. Consequently, one is left to surmise which behaviors and reactions are acceptable and which are not.

Perhaps the most common type of denominational cause involves a teacher who has married, without church permission, outside the faith. The Supreme Court of Canada, for example, held in *Caldwell v. Stuart* (1985) that adherence to a religious faith, including its rules regarding marriage outside the faith, can be a bona fide occupational qualification for teaching in a Roman Catholic school. Although the case was argued under the British Columbia Human Rights Code and the teacher in question was employed in a private Catholic school (British Columbia having no separate schools), the logic of the court would seem relevant elsewhere:

> The Board found that the Catholic school differed from the public school. This difference does not consist in the mere addition of religious training to the academic curriculum. The religious or doctrinal aspect of the school lies at its very heart and colours all its activities and programs. The role of the teacher in this respect is fundamental to the whole effort of the school, as much in its spiritual nature as in the academic. It is my opinion that objectively viewed, having in mind the special nature and objectives of the school, the requirement of religious conformance including the acceptable observance of the Church's rules regarding marriage is reasonably necessary to assume the objects of the school. (*Caldwell v. Stuart,* 1985, p. 18)

Other cases involving the question of marrying outside the faith have included *Essex County Roman Catholic Separate School Board and Porter et al.* (1978), *Essex County Roman Catholic Separate School Board v. Tremblay-Webster et al.* (1984), and *Walsh and Newfoundland Teachers' Association v. Newfoundland (Treasury Board) and Federation of School Boards of Newfoundland* (1988). The latter appears to be the first such case to reflect the use of Section 29 of the Charter of Rights and Freedoms, which reaffirms denominational rights (Anderson, 1989).

A similar denominational cause arises in the case of unmarried couples living together. In *Blatt v. Catholic Children's Aid Society* (1980), it was found that a Jewish man hired to work with disturbed teenagers could be fired because of his lifestyle, that is, his living with a woman without their having undergone a marriage ceremony. Blatt had claimed discrimination on the basis of marital status, but the courts found that he had no marital status. Although this case involved the Catholic Children's Aid Society rather than a Roman Catholic separate school, Blatt's position as a social worker appears to be comparable to that of a teacher.

Another denominational cause is a change in religion. If a person who is hired as a Roman Catholic teacher by a Roman Catholic school system later converts to another religion, he or she may well be dismissed, according to interviewees in several provinces. A change in religion (from Roman Catholic to Salvation Army) was a factor in the *Walsh* case noted earlier. On the other hand, the same system might employ a non-Catholic and ask only that the individual adhere to the tenets of his or her own faith. In other words, different expectations are held for Catholic and non-Catholic teachers, expectations that may or may not be spelled out in their employment contracts.

As noted earlier, there is no clear definition as to what constitutes a valid denominational reason for dismissing or refusing to hire a person. Adminstrators interviewed in Catholic school systems emphasized that they do not "go on witch- hunts" and that if teachers run into problems, whether in

their marriages or other aspects of their lives, the school administrators try to help them resolve problems within the procedures of the Church. For example, they probably would help them to acquire an annulment in the case of a marital breakdown.

While it is not stated as such in court decisions, what actually seems to underlie the concerns of denominational authorities is whether the person involved acknowledges and accepts the authority of the Church over his or her behavior, or if he or she refutes this authority in public action. In the latter case, the religious authority that the school is teaching the children to accept would be undermined. Thus matters handled in full privacy, such as the use of artificial birth control, would probably not arise as a cause for dismissal in a Roman Catholic school system, whereas the public advocacy of such practices in contradiction of the Church's teachings in the matter would be.

While marrying outside the church is perhaps the best example of denominational cause which has been tested in the courts, at least in the case of Roman Catholic schools, not all cases involving this issue have in fact led to the automatic dismissal of a teacher. For example, in *Essex County Separate School Board v. Tremblay-Webster et al.* (1984), the court found that a teacher had a right to grieve a dismissal order and have the matter go to arbitration because the collective agreement in the board guaranteed such a right. That is, the court found that the collective agreement took precedence over the rights that the school board had under the Constitution Act (1867). This type of ruling brings us to the second issue, the way in which statutes related to collective negotiations and the settlement of disputes affect denominational rights.

Collective Agreements

In general terms, the courts have held to date that, in provinces which have separate or denominational schools, the province may not make laws which mandate the settlement of disputes between teachers and school boards that involve denominational matters. In particular, such legislation has been held invalid when used to review cases where teachers have been dismissed for denominational cause. Relevant cases include *Essex County Roman Catholic Separate School Board and Porter et al.* (1978).

On the other hand, as in *Essex County Separate School Board v. Tremblay-Webster et al.* (1984) and *Stack v. Roman Catholic School Board for St. John's* (1979), the courts have held that provincial legislation requiring collective negotiations per se does not prejudicially affect the rights of separate and denominational schools. Furthermore, the courts have ruled that if school boards agree in such negotiations to a reduction in their denominational rights, then they must abide by the agreements because they entered into them voluntarily.

Finkelstein (1985), for one, questions the distinction that the courts have made between provincially mandated practices and those entered into in voluntary agreements between boards and teachers. He points out that it is the *class of persons* holding the Catholic or Protestant faith and not their school boards that have their denominational rights in educational matters

protected by Section 93 of the Constitution Act (1867) and Section 29 of the Charter of Rights and Freedoms. He questions whether school boards have any more right to bargain away these rights than provincial legislatures have to legislate them away. While he may be correct, and the courts may reconsider this matter, in the meantime trustees for separate and denominational schools are probably taking greater care in their negotiations. In the *Tremblay-Webster* decision, the court noted that the clause ensuring a right to arbitration was inserted in the collective agreement *after* the earlier judgment in the Porter decision which stated that provincial guarantees for boards of references in dismissal cases did not apply when dismissal was due to denominational cause.

Also, Newfoundland's Catholic Educational Council has entered into a separate agreement with the Newfoundland Teachers' Association to protect positions of members in religious orders, which had been threatened by the court's decision in *Roman Catholic School Board Exploits-White Bay and NTA* (1983) that seniority rights in the contract could not be ignored in order to keep members of religious orders on staff. In this case the collective agreement was provincially negotiated in a secular setting and was applicable to all school boards, whereas in provinces such as Ontario, collective agreements are negotiated locally and, in the case of Roman Catholic separate boards, are negotiated in a setting in which denominational rights are guaranteed by the Constitution Act (1867). Such a distinction can be important to a court that must interpret the intent of the agreement. Nevertheless, trustees of a Catholic school system who may be considering the possibility of laying off teachers who are not Catholics or who are non-practicing Catholics before laying off those teachers who are in good standing with the Church would be well advised to ensure such action is legal under the employment contract that has been negotiated with their teachers.

Employee Groups

The final issue to be considered is the employment rights of those in different positions. In simple terms, the courts have found that those not directly concerned with the educational mission of the school may not be discriminated against for denominational reasons (*St. Paul's Roman Catholic Separate School Board v. Huber et al.,* 1982). Thus religious requirements for custodians, secretaries, bus drivers, and cafeteria staff are not in order. Indeed, according to Hunter (1972) and discussed in Givan (1986, pp. 203-20, pp. 961-972),

> as a matter of policy [the Ontario Human Rights Commission] has declined to pursue complaints against separate school boards involving teaching positions, but has investigated and attempted to conciliate complaints from applicants for clerical or janitorial positions who allege denial on the basis of their religion. (Hunter, 1972, p. 241)

At the same time, Roman Catholic separate school boards in Ontario may require all staff who are Roman Catholic to be separate school supporters. In *Morra v. Metropolitan School Board and Callaghan* (1981), the courts found that it was not religious discrimination for the board not to

hire as a custodian a Roman Catholic who had elected to be a public school supporter. Instead, it found that the Board had discriminated on the basis of economics; that is, the applicant's decision to direct his taxes to the public system had cost the board revenue. Discrimination on this basis was not proscribed by the Ontario Human Rights Code. It might be noted that, had the applicant been non-Catholic, this possibility would not have existed and the Board could not have refused to hire the person whom they agreed was otherwise well qualified.

A current dispute between the Ontario English Catholic Teachers' Association and the Metropolitan Toronto Separate School Board also hinges on the distinction between economic and religious discrimination. In this case, Gail-Anne Black, a Catholic, was terminated because she and her husband sent their children to a local public, rather than a Catholic, school:

> OECTA is contesting her dismissal on the grounds that the board's policy requiring employees hired after Oct. 31, 1969, to be separate school supporters violates the Charter of Rights and Freedoms. They argue the policy is discriminatory because the Charter guarantees parents the right to educate their children in accordance with their conscientious beliefs. (Polanyi, 1988)

Conclusion

This article examines matters concerning employment in denominational schools: the definition of denominational cause, the role of collective agreements, and the effect of an employee's role. The court cases which were analyzed led to the following conclusions. First, religion, with its inherent moral values, seems to be a bona fide occupational qualification for teaching in a denominational school. In practice, public acknowledgment of the religious authority of the church in question seems to serve as the standard basis for discrimination; public acts or statements which may appear to refute the values of the church seem to provide denominational cause for dismissal. Second, collective agreements have been interpreted by the courts as providing further security for individual employees (e.g., *Essex County Separate School Board v. Tremblay-Webster et al.*, 1984). That is to say, school boards may negotiate a reduction in denominational rights and employees may receive additional safeguards concerning discrimination through a collective agreement. Third, discrimination for denominational reasons does not apply to all positions within the school system. Although denominational cause may provide just reason for discrimination concerning teaching personnel, it does not have the same validity when positions such as secretary or custodian are considered.

Interpretation of case law is a complex task. Similar situations which seem to differ only in small ways may be judged differently. The cases which were presented here dealt with Roman Catholic schools. Yet increased public funding for denominational and other independent schools in Canada has brought these other schools into the public eye. Similar cases concerned with staff from these schools will no doubt appear before the courts in the future.

Some questions which may arise include: How broad are denominational rights? Do they apply to minority Protestant sects? Fundamentalist religions? Secular humanists? What support would a religion proposing ra-

cial superiority receive? How will the questions which Finkelstein (1985) raises—that denominational rights belong to the people and cannot be bargained away by a selected group of trustees—be resolved? Clearly, denominational cause has been identified as relevant to teachers and not relevant to custodial and secretarial workers. Yet how does denominational cause apply in the employment or dismissal of principals, superintendents, psychologists, or consultants?

Finally, because a Roman Catholic separate school board was able to discriminate against a Catholic who was not a separate school supporter, will public boards be able to demand that all their employees be public school supporters?

These questions can in the end be answered only by the courts of law. For the present, teachers, trustees, and others should develop a keener understanding of individual and collective rights. The more that can be done in contracts to refine the meaning and bounds of denominational cause, the greater control these individuals, and not the courts, will have over a question central to their lives.

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The Alberta Journal of Educational Research Volume XXXV, No. 3, September 1989, 196-216

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Principals' Evaluation of Teachers in a British Columbia School District: Are the Reports Professional or Bureaucratic Documents?

This article reports an exploratory study of school principals' evaluative reports on teachers. The reports were drawn from three different times over a 10-year period in the recent past. The primary purpose was to determine whether the evaluation program which the reports reflected was bureaucratic or professional. In order to do so, it was necessary to identify through content analysis of teacher evaluation reports the criteria that school principals appeared to use when they evaluated the performance of teachers. Related to this main purpose were two secondary purposes. The first was to ascertain whether any change in the apparent criteria had occurred over the 10-year period. The second sought to compare the apparent criteria-in-use with what the research literature reports as desirable teaching practice. The study contained the assumption that a more professionally oriented program of evaluation would emphasize criteria that are research-based and that, over time, there would be evidence of a movement toward the use of such criteria and away from a nonresearch-based approach by those conducting the evaluation. The study found that the reports were neither professional nor bureaucratic documents. Rather, they appeared to serve ritualistic purposes that were of little help to the teachers' professional improvement interests and that were of little help to the organization's decision making interests. Neither did the reports reflect their use of research-based criteria. Change over the 10-year period toward the use of more research-based criteria was only minimally evident.

Introduction

When I begin with my graduate class in personnel administration in the fall term, two of the questions I always ask the students in the class are "What kind of evaluation have you had in the recent past?" and "What do you think of that experience?" Without fail, most of them report that they were evaluated infrequently, that when it did occur it was a rather superficial experience, and that it was not a useful experience to them as practitioners interested in their "professional development." The process may serve bureaucratic and political purposes; if so, they are prepared to put up with it. But as for serving a professional purpose, the evaluation experience was seen largely as a waste of time. Wise and Darling-Hammond (1984/85) express a similar view based on a major study undertaken by the Rand Corporation reported in a monograph entitled *Teacher Evaluation: A Study of Effective Practices* (Wise, Darling-Hammond, McLaughlin, & Bernstein, 1984). In the monograph, according to Wise and Darling-Hammond

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(1984/85, p. 28), the authors suggest that in many school districts in the United States, "evaluation is a perfunctory, routine, bureaucratic requirement that yields no help to teachers and no decision-oriented information to the school district."

According to these authors, all school systems treat teachers both as professionals and as bureaucrats and there is more or less tension between these treatments. Depending on one's conception of teaching, one will perform teacher evaluation differently. For the purposes of the study reported here, I distinguished between a more bureaucratic perspective as opposed to a more professional perspective on teacher evaluation.

I argue that it is important to draw this distinction between professional evaluation and bureaucratic evaluation because local teacher evaluation systems are typically said to serve two major purposes: personnel decision making and professional improvement. In practice the former dominates. This domination is inconsistent with the literature's emerging emphasis on evaluation practices which promote the professional development of teachers. If one wishes to emphasize evaluation practices which facilitate teacher professional development, one will attend to the growing body of evidence which appears to discriminate between effective and ineffective practices in teacher evaluation.

In the study reported here, I assumed that a professional perspective on teacher evaluation is desirable in order to enhance the prospects of teacher improvement and growth. Whereas bureaucratic evaluation is characterized throughout a school or school district by a high degree of standardization of practice, a procedural orientation and the use of checklists when evaluators engage in data collection, the more professional approach is characterized by evaluation practices that are varied and flexible and that place an emphasis on an analytic frame of mind toward criteria, kinds of evidence, and the interpretation of evidence.

Using a bureaucratic approach, school districts typically rely on principals to evaluate teachers in a standard manner using general criteria. By focusing on these attributes in order to ensure reliability as much as possible, principals limit the relevance and utility of evaluation for teacher professional growth. Wise and Darling-Hammond (1984/85) point out a number of problems that school districts face when they use this approach:

> The limits on their time and expertise and on the tools available to them mean that principals can, at best, assess whether the teachers in their charge are minimally competent ... bureaucratic evaluation at its best can identify teachers who lack minimal teaching skills. But the characteristics associated with effective bureaucratic evaluation make it irrelevant to the professional growth needs of the vast majority of teachers. For them it is a ritual. (p. 31)

Whereas bureaucratic evaluation is meant to serve the needs of the organization for monitoring how adequate the teacher's performance is, professional evaluation is meant to help teachers meet their needs for support and guidance relevant to improving classroom practice: "Thus, a credible evaluation process for assessing teachers' relative competence and *for improving teaching* must attend to the particular teaching conditions

and demands that teachers face in their work" (Wise & Darling-Hammond, 1984/85, p. 31, emphasis added). The point is, if real teaching improvement is to occur, more than short visits to classrooms by generalist observers is required where those observers largely base their collection of evidence on standardized checklists. Through their research and their findings, Wise and his associates have exposed an important condition with significant implications for those who are interested in and responsible for teacher evaluation and school improvement. The condition is the ritualistic nature of most teacher evaluation practices and the lack of utility of such practices in relation to teacher professional growth.

For those who have an interest in improving the condition of teacher evaluation in Canadian schools, the following questions arise: What are the prevalent supervisory and evaluative practices in provincial schools and school districts? How ritualistic are such practices? To begin to answer these questions, in what follows I report the outcomes of a small, exploratory study of factors used by school principals as they made judgments about teaching performance. These judgments are indicated in the evaluative reports written by principals in one British Columbia school district in the recent past.

The Purpose of the Study

The study reported here sought to enhance the quality of evaluative supervision in schools by identifying the criteria apparently used by principals when they engage in the evaluation of teachers and write reports on them. "Criteria" was selected as the unit of analysis because they are one of the significant components of any program of evaluation. Anyone assessing a teacher's teaching effectiveness must make judgments against a criterion or set of criteria (Storey & Housego, 1980). One of the ways of determining whether a program of evaluation is more or less bureaucratic is to examine the nature of the criteria used and the manner in which they are addressed.

The primary purpose of this study, then, was to determine from an examination of teacher evaluation reports by principals whether the evaluation was bureaucratic as opposed to professional. In order to do so, it was necessary to identify the criteria that elementary and secondary school principals appeared to use when they evaluate the performance of teachers. (Note: "appeared to use" is emphasized in the previous sentence because the analysis is based on the content of what principals write on official report forms. As a researcher, I was using evidence at least "once removed" from the actual situation.)

Related to this main purpose were two secondary purposes. The first was to compare the apparent criteria-in-use with what the research literature reports is desirable teaching practice. The second was to ascertain whether any change in the criteria had occurred over a 10-year period.

Research Design

In order to discover the criteria (or factors) principals appear to use as the bases of their judgments on teachers' performance, an analysis of principals' teacher evaluation reports was undertaken. In addition, a litera-

ture search was done in order to ascertain what recent research says about teacher effectiveness criteria and desirable teaching behavior.

The Research Questions

This study sought to answer three questions: (a) What are the criteria principals appeared to use when they wrote reports on teachers in 1974/75, in 1979/80, and in 1984/85? (b) How do principals' apparent criteria compare with so-called desirable practice as reported in the literature? and (c) Have the principals' apparent criteria changed over time, specifically between 1975 and 1985?

The Data Sources

Officials in a school district in British Columbia were asked if I could have access to principals' teacher evaluation reports. Access was granted on condition the executive of the district teachers' association agreed. That agreement was sought and obtained. Forty-four reports were made available, 14 from 1974/75, 15 from 1979/80, and 15 from 1984/85. Some of the reports were written by elementary principals and others by secondary principals. For purposes of maintaining confidentiality, the names of the teacher, the principal, and the school were removed from each report before I was given access to them. The reports represent approximately 20% of those written in each of the time periods.

The reports were randomly selected from the available pool in the given year (1974/75, 1979/80, and 1984/85) by a senior official in the school district office. That official reported to me that five of the principals wrote 15 of the reports (from two to five reports across the three time periods).

By Ministry of Education standards, the district is considered midsized. It is located in the lower mainland of the province and has a rural as well as a suburban dimension. In 1984/85 there were 26 principalships, four of which were secondary. There were 445 fte teachers in the district working with 7850 fte pupils from beginning kindergarten through grade 12. The budget for the district was approximately $31 million. In 1984/85 there were five senior educational officials working out of the school district office—a superintendent, two assistant superintendents, and two directors of instruction. The school board was made up of seven elected trustees. While there was no written policy governing the procedures and processes involved in teacher evaluation, senior officials expected that classroom observation would be a major means by which evidence would be collected by principals.

With respect to research-based criteria as reported in the literature, I chose to focus on Berliner's (1984) review "which is framed as a review of factors that can be controlled or influenced by teachers and that are known to affect student behavior, attitudes, and achievement" (p. 52). Berliner's four categories of factors are:

1. preinstruction factors (content decisions, pacing decisions, grouping decisions, and decisions about activity structures);

2. during instruction factors (engaged time, time management, monitoring success rate, academic learning time, monitoring behavior, structuring, questioning);
3. climate factors (communicating academic expectations for achievement; developing a safe, orderly, and academically-focused environment for work; sensible management of deviance; developing cooperative learning environments); and
4. postinstruction factors (tests, grades, feedback).

These categories cover only some of the factors that might be considered. For purposes of this study, however, they provide a useful framework for comparing the factors or criteria principals used in the reports analyzed with the factors or criteria cited in the literature as important in terms of having an impact on student behavior, attitudes, and achievement.

Analysis of the Data

The standard form principals used to report on teachers is made up of three parts. The first identifies the teacher, the date, the school, and the school district. It also identifies information about the nature of the teacher's appointment, that is, grade(s) and subject(s) taught; kind of appointment (part-time versus full-time, temporary versus continuing); position held; and years of service. The second part of the report contains the display of evidence on which the principal makes his or her judgment about whether the teacher's performance was satisfactory. In fact, in British Columbia, the report ends by law with a sentence that the teacher is judged as "satisfactory" or "less than satisfactory." The third part of the report is the signature of the evaluator. Prior to sending the report to the district superintendent of schools, the teacher sees a copy. In many instances, the teacher also signs the report.

The first step in the analysis of the reports was to separate them into three groups by year (i.e., 1974/75, 1979/80, 1984/85). The elementary reports were separated from the secondary, and certain of the demographic data were recorded (See Table 1).

Table 1
Number of Principals' Reports By Level of
Teaching Assignment and Gender of Teacher

Time Period	Elementary		Secondary		Total
	Male	Female	Male	Female	
1974/75	6	4	2	2	14
1979/80	2	7	4	2	15
1984/85	4	5	3	3	15
Total Numbers	12	16	9	7	44

The second step was to take each report from a given school year and analyze the substance of the evaluation in relation to the Berliner categories (preinstruction, during instruction, climate, and postinstruction). Because all the factors or criteria used by principals in their evaluations did not coincide with the a priori classification, the category of "other" was added.

This process of data reduction involved the following procedures: I took sentences in the reports and broke them into appropriate parts. For example, from report number two, 1975, I selected the following sentence, "Records are meticulously kept and the daybook, overviews, and previews are thoroughly prepared, indicating careful short term and long term planning" and broke out these parts: meticulously keeps records; thoroughly prepares daybook, overviews, and previews; and carefully plans both short and long term.

The third step in the analysis of the data was to make a judgment about each factor broken out as indicated above and accordingly enter it into one or another of the categories established for purposes of the descriptive analysis. In this case (see above), and using my knowledge of Berliner's explanations of the factors that fit his categories, "record keeping" was entered under postinstruction factors, "preparation of daybook, overviews and previews" was entered under preinstruction factors, as was "long and short term planning."

When this kind of analysis was completed for each report in a given year (e.g., 1974/75), the fourth step was to consolidate the factors from all the reports under the same set of categories so that I had, for a given year, an overall picture of the factors that principals mentioned and the number of mentions for each factor.

Factors were also classified as follows: I ignored those factors that were mentioned only once, recorded those that were mentioned more than once, and treated as *important* those that were mentioned in a majority (more than half) of the reports.

The three sets of reports were analyzed using the procedures described above. The analyses were recorded in Table 2. An examination of Table 2 enabled me (a) to indicate the factors that principals used when they wrote evaluative reports on teachers, (b) to compare the factors emphasized by principals in 1984/85 with those emphasized in the research literature, and (c) to compare the factors emphasized in 1984/85 with those emphasized 10 years earlier and five years earlier.

The Findings

The findings are reported according to the three research questions. Table 2 displays those factors (criteria) that appeared in two or more principals' reports for each of the time periods selected for this study. The factors appear down the left side of Table 2 under one or another of the five categories used in the analysis. Down the right side of Table 2 are columns indicating each of the three time periods from which reports were drawn (1974/75, 1979/80, and 1984/85). Across from each factor and under the appropriate year the number of mentions of each factor are recorded. The "important" factors (as defined in this study) are indicated by means of an

Table 2
Factors in Principals' Reports: 1974-1985

Factor	Number of Times Mentioned		
	1974/75	1979/80	1984/85
I. Pre-instructional Factors:			
(General) planning*	-	-	11
Daily planning*	11	8	3
Long-term planning*	11	7	3
Goals and objectives clearly defined	-	2	-
Prescribed curriculum followed	-	2	-
Sequence addressed in lesson preparation	-	3	-
Grouping practices	7	-	-
Uses cooperative activities in group settings	-	-	2
Individualizes instruction	4	-	6
Diagnostic knowledge of pupils' cognitive growth levels	2	-	-
Lessons related to students' assessed needs/interests	-	3	-
Planned use of learning centres	-	2	-
Arranges "sponge" activities	-	-	2
Arranges availability of extra resources	-	-	5
Resources used to advantage	-	2	-
Uses resource persons in plans	3	-	-
II. During-instruction factors			
Begins instruction with preview	2	-	-
Begins lesson with clearly stated objectives	-	2	7
Engages in "whole group" introduction	-	-	4
Uses teaching aids and devices	5	-	-
Uses resources during teaching	-	4	-
Teaching techniques are varied	-	5	-
Uses questioning techniques	-	5	-

(*Important factors in Principals' reports)

Table 2 (continued)

Factor	Number of Times Mentioned		
	1974/75	1979/80	1984/85
Questions effectively	-	-	6
Gives clear instructions	-	4	-
Emphasizes verbal interaction	-	2	-
Allows for pupil discussion	-	-	6
Routinizes pupil movement	2	-	2
Keeps students on task	-	2	-
Monitors and adjusts as necessary	-	3	5
Attends to time management (transitions)	-	-	4
Reviews and reteaches as necessary	-	-	3
Emphasizes "anticipatory set"	-	-	4
Ensures all students enjoy some success	-	-	2
III. Climate Factors:			
Good rapport*	14	10	6
Good classroom control*	14	6	8
Good housekeeping*	12	-	2
Positive atmosphere, tone*	9	7	-
Displays of students' work*	6	2	8
Teacher holds high expectations*	2	8	-
Clearly stated expectations	-	-	7
Teacher shares ideas	2	-	-
Teacher sensitive to students' needs/ emotions	-	4	-
Uses positive reinforcement	-	-	5
Students show good work and housekeeping habits	4	4	-
Students show mutual respect	-	-	3
IV. Post-instructional factors:			
Record-keeping (marks, attend.)*	9	14	6
Marks students' work and provides feedback*	-	-	11
Checks seatwork	3	-	-
Provides good assignments	2	-	-
Uses adequate grading procedures	-	-	2
Provides help to students with difficulties	2	-	-
Reports to parents	-	3	-

Table 2 (continued)

Factor	Number of Times Mentioned		
	1974/75	1979/80	1984/85
V. "Other" Factors			
Pleasing personality	4	6	7
Teacher is cooperative	7	-	-
Competence/skill	-	5	3
Shows leadership	-	4	-
Is strongly professional*	-	-	8
Register, daybook well-kept	6	-	-
Seeks/heeds suggestions for improvement	6	4	-
Gives time to extra-curricular activities*	5	**11**	**13**
Good relations with staff, office and/or parents	3	**10**	**8**
Teacher has background knowledge	-	7	-
Willing to share ideas	-	3	-
Is a strong supporter of the school*	-	-	**8**
Takes part in inservice activity	-	-	6
Classroom has interest centres	4	-	-
Uses furniture in flexible way	2	-	-
Number of reports examined	14	15	15

asterisk (*). The number of mentions, representing in each case a majority of mentions in each of the time periods, are indicated in boldfaced numerals.

Apparent Principals' Criteria

In this section, I will summarize the criteria designated as "important" in each of the three time periods (see asterisked items in Table 2).

1974/75. In the preinstruction category the reports emphasized "short term" and "long term planning." No factors were emphasized in the during instruction category. In the climate category the reports emphasized "classroom control," "good rapport," "good housekeeping," and "a classroom with a positive atmosphere and tone." In the postinstruction category, "record keeping" was emphasized. No factors were emphasized in the category "other."

1979/80. "Daily planning" was emphasized in the preinstruction category. No factors emerged as important in the during instruction category. "Good rapport" and "teachers' expectations for high pupil performance" emerged in the climate category. In the postinstruction category, only "record keeping" was emphasized. And in the category of "other,"

"taking part in extracurricular activities and intramural activities" and "good rapport with colleagues and parents" showed up as important.

1984/85. The only important factor to show up in the preinstruction category was "planning." In the during instruction category, no factors emerged as important. The climate factors which showed up were "classroom control" and "display of pupils' work." In the postinstruction category "marking pupils' work and accompanying feedback" was indicated. Four factors showed up in the category "other"—"the teacher's willingness to undertake extracurricular activities," "the teacher's support of the school," "a strong professional attitude on the part of the teacher," and "good rapport with colleagues and parents."

Discussion. One interesting feature of all the factors mentioned in the reports is that, for the most part, they are not operationally defined or empirically supported. It is not possible from the written reports to determine the evidence the principals used to make judgments about, for example, "good housekeeping" or "classroom control." The judgments appear nearly always to be high inference judgments. The reports appear not to be professional documents in the sense that they have not been written in a manner to facilitate professional growth. Neither do they appear to be bureaucratic documents in the sense that they do not reflect the use of standardized criteria from, say, checklists. Another feature appears to be the paucity of factors on which judgments were made. Still another is the apparent lack of emphasis on during-instruction factors.

Principals' Criteria: A Comparison Across 10 Years

Table 2 displays "important" factors identified in the majority of reports in each of the categories and for each of the time periods. (Those factors are marked with asterisks.) Only one factor appears across the three time periods, namely "planning" (in the preinstruction category). No factors emerge as important in the during-instruction category in any of the time periods. Under the climate category, six items are recorded. Those that appear two out of three times are "good rapport," and "classroom control." Those that appear one out of three times across the years are "display of students' work," "good housekeeping," "positive atmosphere and tone," and "holds high expectations for students." In the postinstruction category, two factors emerged—"record keeping" and "marking students' work with feedback." The former was important in two out of three time periods, the latter only in one. In the category of "other" there are four factors, none of which shows across the three time periods. Two of the factors show as important across two of the time periods (i.e., "giving time to extracurricular activities," and "good relations with colleagues and parents"). The other two show up once across the three time periods. They are "the teacher is strongly supportive of the school," and "the teacher is strongly professional."

Discussion. What does show up in the 1984/85 reports that was not present previously, is the use of terminology from the Hunter (1984) repertoire (see Table 2). Note, however, none of the "Hunter factors" shows up as "important." The use of the Hunter terminology is not surprising in light of the fact that, in this school district since the early 1980s, there has been a

districtwide staff development program for teachers and principals focusing on what is called "teacher effectiveness training" (TET). A clinical approach to the supervision of teachers has also been part of this program (Grimmett, Housego, Moody, & Balasubramaniam, 1986). What is surprising, however, is that not all the reports are replete with the criteria dealt with in the TET program, for example, criteria such as "anticipatory set," "teaching to objective," and "monitoring and adjusting."

The overriding impression from the 1984/85 reports is that they differ little from the 1974/75 and the 1979/80 reports in those factors this study labels as important. Only one factor, "planning" shows up across all three time periods.

This is not to say that some reports in the 1984/85 period were not characterized by an emphasis on the TET language. The data appear to indicate that at least some principals were using the new language of pedagogy presumably learned through the districtwide staff development program.

Research-Based Criteria and the 1984/85 Principals' Reports: A Comparative Analysis

In what follows, I compare Berliner's (1984) researched-based factors with the factors that emerged in the 1984/85 reports. An explanation of the meaning Berliner attaches to his factors is provided and compared with what has been written in the reports. Comparisons are made category by category. All page-number references in this section refer to Berliner (1984).

Preinstruction Factors

Content decisions. Berliner defines what subject matter the teacher chooses to teach with the content-decisions factor. For example, even though the curriculum may call for the teacher to teach fractions, the teacher may choose not to do so. Berliner says, "the perceived effort required to teach a subject-matter area, the perceived difficulty of the subject matter for students, and the teacher's personal feelings of enjoyment while teaching a subject-matter area influence the teacher's choice of content" (p. 53). Content decisions could mean that student achievement in a given subject-matter area simply will not happen because the student does not have the opportunity to learn in that area.

A look at Table 2 suggests that the 1984/85 data are inconclusive. Whether the factor "planning" includes reference to content decisions by the teacher can only be surmised from the reports. In not one of them was there actual reference to evidence of teachers' content decisions.

Time allocation decisions. Such decisions have to do with the actual amount of time allocated by the teacher among and within the various subject-matter areas. Research shows what Berliner refers to as "incredible variation in the time allocations that are made by different teachers" (p. 54).

Table 2 shows no direct reference to this factor. Again, one might argue that the factor of "planning" encompasses time allocation decisions. A close examination of the actual reports indicates no references to time allocation

as such, although references to daily planning and unit planning may take this factor into account.

Pacing decisions. The more the teacher covers, the more the students seem to learn. What is significant about this point has to do with the variability across classes. "The choice of pace, like the choice of content, and the decisions about time to be spent learning particular content areas, determines student achievement" (p. 55).

Not one of the 1984/85 reports makes reference to the factor of pacing. Again, however, those who wrote the reports may have asked questions of teachers about this factor, they may have examined long-term plans which enabled them to infer pacing, but if so it is not clear in the reports.

Grouping decisions. Because the classroom is a collection of persons, teachers have to make decisions about student work groups. The decisions have to do with the size and composition of particular groups for particular purposes in particular subject-matter areas. Research indicates that particular kinds of grouping decisions can affect positively the achievement levels of students (pp. 55-56).

Table 2 provides some evidence that principals were attending to teachers' decisions about grouping. In a minority of reports, references were made to group settings and individualizing instruction. However, there is no direct evidence in the reports themselves that principals examined documents for or spoke to teachers about their grouping decisions.

Activity structure decisions. The way in which student activities are structured will affect instruction, either enhancing or limiting the teacher's ability to instruct. Examples of activity structures are lecture, discussion, recitation, reading circle, computer-mediated instruction, television, seatwork (p. 56).

Table 2 suggests that in two out of 15 reports (1984/85), there was reference to teacher planning "sponge activities" to engage students who had completed their assignments and needed something worthwhile to do during the remainder of the lesson period. An examination of the reports, however, shows little direct evidence that principals attended to this factor in their evaluation of teachers.

During Instruction Factors

Engaged time. This refers to the use of allocated time by students in productive ways. What researchers call "engagement rates" vary widely across classes. "Teachers need to be aware of engaged time rates—for individual students and for the class as a whole—in order to ensure that a sufficient amount of time allocated to instruction in a content area is used by students in productive ways" (p. 57). Table 2 shows the during-instruction factors that appeared in principals' reports in 1984/85. One factor at least implies a focus on "engaged time"; that is, reference to what Hunter (1984) calls "active participation." Six out of 15 reports made reference to "active participation." When a teacher seeks active participation, he or she is attempting in a variety of ways to keep students on task. Teachers behaving in this mode are attempting to maximize engaged time.

Time management. This refers to transition times within and between lessons. Much instructional time can be lost by poor time management practices during transitions (pp. 58-59). Table 2 indicates that in four out of 15 reports, attention was paid to this factor.

Monitoring success rates. The more success students have at reasonably challenging tasks, the higher their achievement level. "Success rate ... appears to be another powerful variable with known effects on achievement. Like other classroom variables, it needs to be monitored, evaluated, and often modified" (p. 59). Table 2 indicates that this factor was referred to in two out of 15 reports. The references were general—that teachers ensure that students enjoy some success. The reports provide no evidence that those who wrote them were specifically interested in particular students' success rates in various subject-matter areas.

Monitoring students working on their own. Monitoring in this sense is defined as behavior on the part of the teacher that keeps students who are working on their own engaged in their assignments, that is, keeps at a high level the number of substantive interactions between student and teacher (pp. 62-63). Five reports out of 15 mention monitoring (see Table 2). According to the reports, teachers "monitor and adjust while teaching." While Berliner's reference is to monitoring students when they are on their own doing assignments, the reports refer to monitoring and adjusting while actively instructing. The reports seem to be addressing something other than what Berliner is getting at.

Structuring. This factor has to do with teachers communicating clearly to students their objectives and their directions (p. 63). Table 2 indicates that in seven out of 15 reports principals focus on "lesson objectives" being clearly stated. Two reports mention "giving clear directions." This factor is addressed in the 1984/85 reports, although it appears in a minority of the reports.

Questioning. Questions may be categorized as higher or lower order. Lower order questioning "promotes participation, establishes a factual data base ... and provides high success experiences for [some] students" (p. 64). For other students, higher order questioning leads to higher student achievement (p. 64). While Table 2 shows that in six out of 15 reports questioning was mentioned, an examination of the reports indicates that no mention was made of levels of questioning. When the reports say "questions effectively," one is left to wonder what "effective" is.

Climate Factors

Communicating academic expectations for achievement. This involves teachers setting high (academic) performance standards for those they teach (pp. 66-67). Table 2 shows that seven out of 15 reports included references to clear statements of teachers' expectations. From the reports it is not clear, however, that the references are to academic expectations.

Developing a safe, orderly, and academically focused environment for work. This factor involves the consistent and fair application of clear and reasonable rules. Also it has to do with teachers behaving in a businesslike

manner as they go about their work (p. 67). Table 2 indicates that three factors appear to fit Berliner's meaning—what is called in the reports "good classroom control" (8/15), "a well-organized classroom" (2/15), and "routinized student movement" (2/15). Note, however, only one of these factors is found in more than half the reports; that is, classroom control.

Sensible management of deviancy. According to Berliner this factor is evident when teachers "nip in the bud" behavioral problems; when they are able to manage more than one thing at a time as they teach and deal with students; when they use "signals" for academic work [a means of monitoring involvement]; when they maintain "momentum" and "smoothness" in their presentations; when they emphasize "accountability" of students during recitations and assignments; and when teaching is characterized by "variety" [in methods and materials, etc.] (pp. 67-68). A number of factors displayed in Table 2 suggest that the sensible management of deviance is evident in the teaching on which the reports have been written. The following seem to be related: "good classroom control" (8/15), "friendly environment" (6/15), "uses positive reinforcement" (5/15), and "students show mutual respect" (3/15). On the other hand, an examination of the reports shows that none of the items in Berliner's review is referred to as such. In other words, the reports do not contain thick descriptions of teacher behavior that would lead one to judge that a classroom is characterized by "good control." So again one must ask, "On what grounds are the factors in the reports based?"

Developing cooperative learning environments. When teachers develop cooperative learning environments they organize and conduct the work students do in such a way that every member of a group is required to participate in activities that can only be completed successfully "through interdependent and cooperative behaviour" (p. 68). Table 2 contains no reference to this factor. None of the reports contains mention of students engaged in assignments involving "cooperative learning."

Postinstruction Factors

Tests. Teachers engage students only in those tests which accurately reflect what has actually been taught (pp. 69-70). Table 2 shows that the reports contain no reference to teachers' tests as such. One might assume from the factors which are reported that tests form part of the basis for teachers' assessments of students, but there is no direct evidence to suggest that principals checked out and compared the tests teachers gave against what those teachers actually taught.

Grades. Here Berliner is referring to the judicious use of grades that are tied to objective performance (p. 70). Table 2 shows that in two out of 15 reports, principals made reference to the use by teachers of "adequate grading procedures." Whether this means that principals assessed student performance in relation to the grades assigned by teachers is not clear from an examination of the reports.

Feedback. This factor has to do with the substantial use of corrective feedback in academic areas, valuing students' contributions by using their

ideas, and contingent praise for proper behaviour (p. 71). Eleven out of 15 reports (see Table 2) contain reference to feedback—"the teacher marks students' work, provides feedback." Again, however, one is hard put to know exactly on what the principals are basing their judgments. What do they mean by "feedback?"

Discussion

Table 3 demonstrates the relationships between Berliner's research-based factors and the factors that appear in the principals' reports for 1984/85. Berliner's categories and the factors under each category are listed on the left side of Table 3. Down the right are three columns labeled *yes*, *no*, and *undecided*. Opposite each of Berliner's factors is entered the factors mentioned in the 1984/85 principals' reports and the number of times in the reports each factor was mentioned. An entry in the *yes* column indicates a clear connection between what Berliner is writing about with respect to a factor and what the reports say; an entry in the *undecided* column indicates that I am unable to say with certainty that what the reports record and what Berliner is writing about are the same thing. An entry in the *no* column indicates that the principals are silent on the Berliner category.

Table 3 suggests that we cannot be sure that the principals in 1984/85 were using research-based knowledge when they evaluated teachers' classroom performance. The uncertainty stems from what might be called the *scarcity* of factors and the *generality* with which they are stated. As Table 3 indicates, only in six instances are we looking at what, in this study, are called important factors. Interestingly, in each of the six cases the factors are in the *uncertain* column which means that they are written at such a level of generality that it is not possible to infer in what empirical and operational activities they are anchored. This being the case, and taking a rather conservative view, I would judge the reports in 1984/85 do not reflect a research-based knowledge of the criteria of teacher effectiveness.

Conclusions and Recommendations

This small-scale, exploratory study set out to discover the criteria that were used in teacher evaluation reports in a British Columbia school district at three points in time over a 10-year period, whether those reports provided evidence over time of changes in the criteria used, and whether the most recent reports appear to reflect a clear knowledge of research on teacher effectiveness on the part of those who wrote the reports. The larger purpose was to gather evidence that would throw some light on whether the reports could be thought of as professional or bureaucratic documents.

Conclusions

What criteria do principals appear to use? If we focus on the latest set of reports, the following criteria show up as the *important* ones: (a) planning, (b) classroom control, (c) displaying students' work, (d) marking students' work and providing feedback, (e) giving time to extracurricular activities, (f) strongly supporting the school, (g) behaving in a professional manner, and (h) having good relations with colleagues and parents.

Table 3
A Comparison of Factors:
Research-Based vs. 1984/85 Reports

RESEARCH BASED FACTORS Berliner	FACTORS IN REPORTS:1984/85) Yes	No	Undecided/Unclear
PREINSTRUCTION FACTORS			
content decisions			Planning (11/15)*
time allocation decisions			Planning (11/15)*
pacing decisions			Planning (11/15)*
grouping decisions			Individualized instruction (6/15) uses cooperative activities in group settings (2/15)
activity structure decisions	arranges to have sponge activities available (2/15)		
DURING-INSTRUCTION FACTORS			
engaged time	emphasizes active participation (6/15)		
time management	attends to transitions (4/15)		
monitoring success rate			ensures all students enjoy some success (2/15)
monitoring			monitors and adjusts while teaching (5/15)
structuring	begins lesson with clearly stated objectives (2/15) gives clear instructions (2/15)		
questioning			questions effectively (6/15)

Table 3 (continued)

CLIMATE FACTORS			
communicates academic expectations for achievement			clearly stated expectations (7/15)
develops a safe, orderly and academically focused environment for work			good classroom control (8/15)* well organized classroom (2/15) student movement is routinized (2/15)
sensible management of deviance			good classroom control (8/15)* uses positive reinforcement (5/15) students show mutual respect (3/15)
develop cooperative learning environment		0/15	
POST-INSTRUCTION FACTORS			
tests			marks students work; provides feedback (11/15)
grades			uses adequate grading procedures (2/15)
feedback			marks students work; provide feedback (11/15)

(*Important factors in Principals' reports)

What is interesting about this list is the following:

1. The lack of reference to any of what Berliner calls "during instruction" factors;
2. The overall scarcity of factors;
3. The high level of generality at which the factors are reported; and
4. In relation to the first four, the last four are factors which fall outside the actual classroom. In other words, what principals value about effective teaching is only partially related to what teachers do in classrooms.

Did the principals' apparent criteria change over time? The evidence from the reports suggests that the situation in 1984/85 was not very different from the situation in 1974/75. It is necessary to point out, however, that by 1985 some principals were using a quite different language of pedagogy to express themselves in the body of the reports. The different language, used in a minority of reports in 1984/85, was likely an outcome of a districtwide teaching effectiveness staff development initiative in which both principals and teachers had been involved over the past few years.

Do these criteria reflect the current literature on teacher effectiveness? This question is difficult to answer because of the level of generality of statements in the reports and because, therefore, it is not possible to determine the specific evidence that principals used to form their judgments. The paucity of factors also seems relevant to this question as does the evidence that no during-instruction factors made it into the *important* category as defined in this study. Taking a rather conservative view based on a close examination of the reports, I concluded that the reports show little evidence of the application of research-based knowledge. (Note: this conclusion assumes that an objective, empirical, low-inference data base is required for the purposes of the school district's teacher evaluation program if that program is concerned with the relationship between teacher evaluation and teacher development.)

Looking now at the larger question about the nature of the reports and to what extent they reflect a bureaucratic orientation to evaluation in contrast to a professional orientation, what can be said? Recall that a bureaucratic evaluation is characterized by a highly standardized approach, one that is procedurally oriented, and one in which the criteria are general. A more professional evaluation is characterized by a clinical approach focused on the details of practice and the joint analysis of that practice by the principal interacting with the teacher.

On the basis of the evidence, what appears to be happening is a "diluted" kind of bureaucratic evaluation. While the format of the forms used for the official reports is standardized, the content of the reports is not. In other words, principals appear to take an ad hoc approach to report writing when it comes to the criteria they use to judge performance. They do not act on the basis of districtwide or schoolwide policy on an acceptable set of common criteria.

It seems quite clear that the reports are not professional documents. For reasons discussed above, one can argue that the reports form a weak foundation on which to engage in the clinical analysis of teaching.

If the reports are neither bureaucratic nor professional documents, what are they? They appear to serve a bureaucratic purpose, that of enabling officials to say they have complied with the requirements of the School Act in relation to the evaluation of teachers. Beyond that, the reports appear to be the product of a ritualistic act with little meaning from a professional development perspective for those who are involved.

Recommendations

Given the exploratory nature of this study and the limited number of reports, it is not possible to generalize the conclusions to other districts. However, the study has thrown some light on the question of criteria and the nature of the evaluation process in one district. It is possible to make some recommendations to officials and others in the district if responsible parties are interested in making the evaluation program more professionally oriented. Based on the conclusions of this study it is recommended:

1. That a policy be developed by teachers, principals, and other officials to establish at least a core of criteria to be used in the evaluation of teachers. The policy could be either school-level or district-level. Presumably the emphasis would be on research-based criteria.
2. That the policy address the related problems of criterion measures, the expertise of those who evaluate teachers, the means by which evidence is collected and shared, and the time required to do the work entailed.
3. That there be a designation by appropriate officials of the human, material, time, and fiscal resources required to accomplish the development and implementation of the policy indicated in (1) and (2) above.
4. That there be developed a means of monitoring the implementation and continuation of the teacher evaluation policy in order to ensure it is in place and moving in the direction of a more professional approach to evaluation as opposed to a merely bureaucratic one.

Postscript: Caveat Emptor

This article suggests that the criteria used in judging teaching be research-based and not merely whimsical and ad hoc. Recently a point of view has emerged that questions the desirability of using research-based criteria when rating teacher effectiveness. Scriven (1987), Popham (1987), and Denham (1987) all express the view that research on teacher effectiveness cannot guide teacher evaluation, that objective evaluation techniques cannot guide in an effective way the process of teacher development, that the validity of any approach that rates teachers solely on the basis of the number of performance criteria actually met is to be seriously questioned. The views of these authors, in other words, take exception with what has been called "scientific" or "deterministic" evaluation. Smyth (1989) argues for an approach to supervision and evaluation which is "educative" as opposed to "managerial."

In the face of such views, and with the point of view that evaluation is to serve the purpose of teacher development, I would continue to argue for what one might call a "modified [educative] research-based approach." According to McLaughlin (1986),

> Theory and experience suggest that teacher evaluation of another stripe can support teacher growth and development, strengthen the role of the principal and contribute significantly to the vitality and coherence of the school. (p. 162)

McLaughlin reports that some school districts are moving away from what he refers to as a "deterministic process-product model of teacher evaluation." In such districts principals are trained to observe in classrooms, to help teachers think through classroom problems, teacher-pupil interactions, and the structure of classroom instructional practices. He says, "Principal training framed in this model acknowledges the conditional nature of teacher effectiveness and focuses on individual teacher's judgments and choices within broad and widely held categories for effective teaching" (p. 162). What appears to me to be indicated in the above view is the use of various kinds of research-based knowledge on teaching effectiveness as *sensitizing devices* whereby the concepts are thought of as "primitive" and

heuristic when evaluators observe, describe, and discuss teaching with teachers in a helping or development mode. According to Bacharach and Lawler (1980),

> Despite the inherent vagueness of primitive concepts they often (1) reveal the complexity and multidimensionality of phenomena that might otherwise be treated in an oversimplified or unidimensional manner, (2) serve as integrative devices for analyzing seemingly disparate ideas, and (3) lead to more specific, well-defined ideas. (p. 14)

This approach appears to reflect that proposed by Wise and Darling-Hammond (1984/1985). The study of effective teacher evaluation practices reported by these authors found that in districts where evaluation emphasizes improvement as well as personnel decisions, the districts have developed and use more professionally-oriented evaluation strategies. That is to say, "They have increased the key resources for evaluation—time and expertise—by resisting the bureaucratic impulse to treat all teachers alike and by involving expert teachers in the evaluation process" (p. 32).

Also, such districts are moving toward a participatory approach (teachers and administrators) to evaluation as distinct from the more traditional adversarial approach. Such an approach not only enhances teachers' rights, but also their responsibilities. "The move toward negotiated responsibility contains the seeds of collaborative control over teacher quality; it creates a framework within which educators—teachers and administrators—can work together to improve the quality of their common professional work" (p. 33). What Wise and Darling-Hammond are suggesting is a radical departure from present practice. They are emphasizing certain features that would be common to any revamped evaluation program: (a) the evaluator is a specialized expert, (b) a wide range of indicators characterizes the evaluation format, and (c) the criteria used rely on high inference variables and are susceptible to individualized applications (p. 32).

Do such features characterize present practice in British Columbia school systems? Before we can fully answer this question we need further evidence. For example, who are the evaluators? What kinds of expertise do they have? What criteria are applicable and acceptable to the various stakeholders? How is evidence collected so as to ensure as much as possible its relevance and reliability? How is the evidence shared between and among evaluators and those evaluated? By means of what procedures and processes are evaluation practices conducted? How are evaluation policies and programs created, implemented, maintained, monitored, and changed?

On the bases of answers to these and other questions, it would be possible to *describe* contemporary evaluation programs and practices in various educational jurisdictions (school, school district, or province), to *appraise* the nature of the programs and practices in relation to the bureaucratic versus professional distinction, and then to *prescribe* policy decisions and actions to be taken in order to begin to close the gap between the reality of present practice and a more desirable state of affairs in relation to teacher evaluation and teacher development.

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The Alberta Journal of Educational Research *Vol. XXXV, No. 3, September 1989, 217-236*

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Cognitive Flexibility and Inflexibility in Principals' Problem Solving

This study examined aspects of the problem solving processes of elementary school principals. Guided by information processing theory and recent social-psychological explanations of expertise in solving "messy" problems, the study was intended to determine (a) whether principals' problem solving would demonstrate some of the same attributes of cognitive flexibility and inflexibility found in the problem solving of those working in other domains, and if so (b) to illustrate the nature of such flexibility in the context of school administration. Protocol data of several types were collected over a two-year period from 22 principals. Results identify such sources of inflexibility as cognitive errors, uncontrolled moods, and lack of responsiveness to opportunities in the problem solution. In each case, more appropriate strategies are identified. Differences in flexibility between expert and nonexpert principals are briefly reported.

Contemporary studies of what principals do and descriptions of highly effective practice have contributed substantially to the knowledge base required for school improvement. While we are now better able to describe what some effective principals do in some situations, we know practically nothing about how they come to act as they do. What is it that shapes their practice, and what meaning do they find in such practice? Until these questions are addressed, our ability to assist principals in becoming more effective will be severely restricted.

Research reported in the paper is part of a larger series of studies exploring the problem solving strategies and thought processes of principals. This series is in the tradition of problem-solving research based on information processing theory and is aimed at clarifying differences between expert and nonexpert principals in a variety of problem domains. Building on the findings of two directly preceding studies (Leithwood & Stager, 1986, 1989), this paper reports the results of examining one dimension of problem solving: flexibility (defined in detail below). For purposes of this study, the attributes of flexibility in principals' problem solving were defined on the basis of research carried out in other domains characterized by relatively

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unstructured and messy problems. Two general questions were addressed: Does principals' problem solving demonstrate attributes of flexibility and inflexibility similar to those found in the problem solving of people working in other domains? Do principals who engage in overt practices judged to be highly effective or expert demonstrate greater flexibility in their problem solving than their less effective or less expert peers? Answers to these questions provide a basis for helping to decide whether further inquiry about principals' cognitive flexibility is likely to be productive.

The choice of flexibility in problem solving as a focus for this study emerged most directly from our prior explorations of principals' problem solving. However, similar conclusions about the importance of flexibility have been reached independently by those working in a variety of fields. For example, Scribner (1986) points out that flexibility in meeting changing conditions (and what Schön, 1983, terms "informal improvisation") are well-documented aspects of practical intellect among dairy workers, assemblers, and warehouse employees. Results of Schwenk's (1988) review of research suggest that cognitive flexibility is central to successful strategic decision making on the part of senior managers in private corporations. As far as we are aware, however, only Glasman (1986), in addition to ourselves, has acknowledged its promise for understanding aspects of educational administration. Glasman asserts:

> The value of focusing on flexibility in judgment rendering should not be mysterious. After all, flexibility is required whenever there is uncertainty. What may be new to students of school leadership is that the work which Bruner and Simon began continues until this day, and its focus in cognitive psychology is on judgment research (e.g., Kahneman, Slovic, and Tversky, 1982).... Current cognitive psychologists who work on judgment rather than choice are sending the message that judgment under uncertainty is central. It is high time that students of school administration admit it too, and set out to examine it rather than be ashamed of it. (p. 167)

Framework

The framework for the study is based on several reviews of research carried out in related areas of social cognition. Showers and Cantor's (1985) review of research on social cognition provided the general outlines of the framework. This review examined the relationship between elements of motivation and cognitive processes central to problem solving effectiveness, as depicted in Figure 1. The utility of this conception for interpreting

Motivational Elements	Flexible Cognitive Strategies	"Appropriate" Action
Goals	- Responsiveness to situations	
Mood	- Active control	
Knowledge	- Multiple interpretations	
	- Change in repertoire	

Figure 1: Showers and Cantor's (1985) Conception of the relationship between sources of motivation and problem solving

evidence from our preliminary work and the comprehensiveness of research on which it is based were reasons for adopting Showers and Cantor's conceptualization, with some adaptation, into our framework.

Motivation, according to Showers and Cantor (1985), is a product of one's personal goals, mood states, and the knowledge one already possesses relevant to the problem at hand. Each of these sources of motivation guides one's interpretations of a problem and plans for how to respond to that problem. The relationship between these three sources of motivation and one's response to a problem is mediated by dimensions of one's thinking. These dimensions, within which Showers and Cantor define "flexibility," include: recognition and responsiveness to novel aspects of a problem; degree of active control over one's thoughts and plans; how one interprets a situation; and change in one's knowledge, beliefs, and values as a function of experience. Evidence reviewed by Showers and Cantor suggests that social problem solving is enhanced as one moves toward the flexible end of each of these dimensions. Flexibility involves:

> (a) adjusting interpretations in response to situational features; (b) taking control of [one's] thoughts and plans; (c) seeing multiple alternatives for interpreting the same event or outcome; and (d) changing [one's] own knowledge repertoire by adding new experiences and by reworking cherished beliefs, values, and goals. (p. 277)

The bulk of the evidence from research on social cognition, however, demonstrates more passive, less flexible ways in which prior knowledge contributes to one's interpretations and strategies. The inflexible end of the four dimensions of thinking include tending to cling to favorite interpretations and not be responsive to situations; exercising little active control over moods, self-defeating cognitions, and dysfunctional strategies; being trapped by perceptually salient and cognitively available stimuli; and having schemas and stereotypes in one's knowledge repertoire that are resistant to change. In applying the Showers and Cantor (1985) conception, we decided to concentrate only on the first three elements of flexibility and inflexibility because the fourth was concerned with a time frame too lengthy to capture in our study. In addition, although we used the terms *goals* and *moods* in the manner of Showers and Cantor, we took a somewhat different approach (explained below) to the role of knowledge, which is the third motivational element considered by these authors.

Two additional research syntheses were used to further elaborate on selected aspects of the Showers and Cantor formulation. Nisbett and Ross (1980) provide evidence related especially to the matter of knowledge and to the third aspect of inflexibility—"being trapped by perceptually salient and cognitively available stimuli." While they do not deny the importance of motivation in situations where problem solving appears unsuccessful, they believe that there are additional explanations. According to evidence which they review, problem solving failures often are "cut from the same cloth" as successes. That is, certain strategies are well adapted to deal with a wide range of problem situations (for example, recalling what you did the last time you encountered a similar problem) but become a liability when applied beyond that range (for example, when the current problem has unique

features that must be addressed). Most of the evidence in support of this claim was generated in relation to problems which required some understanding of the normative principles that guide the professional scientist's formal inferences (for example, rules for deciding how "representative" is a sample of opinion data).

There are two general kinds of tools that people use in interpreting situations or in making inferences about them by "going beyond the information given." The first kind of tool, much studied by Kahneman, Slovic, and Tversky (1982), involves using two judgmental heuristics to make inferences—the availability and the representativeness heuristics. In the case of the *availability heuristic,* judgments about the likelihood of an event are based on the availability of past occurrences in one's memory. Frequently occurring events are usually easier to recall than those which occur infrequently, so availability is a good way of estimating probability. But this heuristic may also distort estimates of probability because other things besides frequency can increase the availability of an event in one's memory (for example, recency or vividness). The *representativeness heuristic* is used to estimate the likelihood of some state of affairs (for example, poor quality of a teacher's instruction) given knowledge of some other state of affairs (for example, the inattentiveness of a student during a lesson). While this heuristic is an essential cognitive tool, it can mislead, for example, when it restricts the problem solver's attention to superficial causes of a problem or when it is used in conjunction with an incomplete understanding of cause and effect relations. The other kind of tools to be used in addition to heuristics are knowledge structures: theories, beliefs, and other representations, in the problem solver's mind, of external reality. These knowledge structures, while often valuable, can mislead to the extent that they are incomplete or incorrect representations of external reality and to the extent that they preclude attention to the details of the actual object or situation at hand.

In combination, then, the three research reviews discussed above provided a set of categories for recognizing instances of cognitive flexibility and inflexibility among principals, as well as suggestions regarding the cognitive and motivational factors which may influence them.

Method

Sample

Twenty-two elementary school principals (one female, 21 male) took part in the interviews on which our analysis is based. They were selected from three boards of education in order to ensure that the unique context of a single school board did not skew the results in unknown ways. Six of the 22 principals were designated as *experts.* No single method for arriving at this designation, of which we are aware, is sufficiently robust to be relied on exclusively. As a result, principals considered effective or expert in this study had to pass through two screens, each with its own compensating strengths and limitations. First, two central administrators from each board were requested, independently, to indicate which, of all principals in their boards,

they would recommend as highly effective. Only principals nominated by both administrators passed this screen. The strengths of this method are that (a) it is based on extensive data; (b) it requires agreement by two people who may have different experiences with the principals; (c) it is thoroughly grounded in the actual work of the principal in a wide variety of contexts; and (d) it allows for the application of alternative criteria as the basis for defining effectiveness. Weaknesses inherent in this method include: (a) the informal, "clinical" nature of the data base; (b) the unknown reliability of those judging the principals' expertness; and (c) the unknown basis on which a judge's decisions were made.

All principals passing the first screen were given an extensive interview keyed to a four-stage conception of growth in principal effectiveness or expertise called The Principal Profile (Leithwood & Montgomery, 1986). These interviews were conducted by researchers who were familiar with the Profile but were not involved in other aspects of the study. The strengths of this method are that (a) the criteria on which judgment was made are explicit; (b) the criteria were based on a synthesis of all relevant empirical research reported in the English language up to 1985; (c) the interview instrument used to collect the data had been developed and refined during the process of approximately 200 interviews conducted prior to its use in this study; and (d) formal steps were taken to ensure high levels of reliability among interviewers. The weaknesses of this method include those typically associated with self-report data: There may be a discrepancy between what principals say they do and what they actually do. As Figure 2 indicates, the two methods used in designating principals *expert* or *nonexpert* compensated for one another's weaknesses reasonably well.

Those principals who not only were judged as highly effective by both administrators from their boards but who also obtained high ratings (3+ or 4) on the Profile as a result of the interview were designated as *experts*. Six principals met both of these criteria. The remaining 16 principals were considered *nonexperts* in reporting results.

Sources of Variation	Reputation-Based Judgment	Principal Profile-Based Judgment
1. Amount of data on which judgment was based	Extensive	Modest
2. Period over which data were collected	Long	Short
3. Explicitness of criteria	Implicit	Explicit
4. Validity of criteria	Unknown	Highly valid
5. Reliability of data collection procedures	Informal	Formal

Figure 2: Strengths and limitations of two methods of determining principals' effectiveness

At the beginning of data collection, the six experts had an average of 15 years of experience in school administration, while the remaining 16 principals had an average of 17 years of experience. The experts' schools had an average of 506 students, and four of these schools had vice-principals. The remaining principals' schools had an average of 350 students, and five of them had vice-principals.

Data Collection Procedures

Protocol data were collected over a two-year period using three types of process-tracing methods (Hayes & Flower, 1983): retrospective reports, think-aloud methods, and stimulated recall. The last two of these methods have been shown to be reasonably free of the major threats to the validity of verbal reports (Nisbett & Wilson, 1977) including the distorted reporting of cognitive processes, incompleteness of description, and failure of respondents to rely on memory or to rely only on what can be retrieved from long-term memory. As Ericcson and Simon (1984) argue, both think-aloud and stimulated recall methods primarily draw on the contents of respondents' short-term memory, and such memory for cognitive processes appears to be accurate. Retrospective reports, however, rely primarily on retrieval from long-term memory; their validity, therefore, is more suspect.

The first interview in Year 1 included three sets of questions. The first set referred to 25 paragraph-length case problems which were encountered and prepared for us by principals. These problems were provided to principals in the study in advance of the interview, along with instructions to read the case problems and to sort them into separate piles in terms of similarities of the solution process they would use. Questions in this part of the interview concerned why the principals sorted the problems as they did. The second set of questions, somewhat open-ended in nature and followed by detailed probes, focused on principals' reflections on their own problem solving, how it had changed with experience, and factors (such as values and beliefs) perceived to influence it. The final set of questions elicited information about how principals selected, from myriad problems they encountered, those to which they assigned time and priority (see Leithwood & Stager, 1986, for results).

This first interview instrument and procedures for its use were pilot tested, in several iterations, with 12 principals and with 10 teachers enrolled in a preservice principal preparation course. Data were collected from the 22 principals in the main study sample by a researcher who had not been involved in the interview leading to the Profile ratings and who was unaware of the reputational rating of the principals. Interviews averaged about 1¼ hours; they were audiotaped and subsequently transcribed. These interview records were then coded and content analyzed.

The second interview in Year 1 explored differences in problem solving associated with variations in problem structure. All principals were asked to rank a set of brief case problems (see Table 1) in terms of how clear, at the outset, the course of action to be taken was. Then they were requested, using think-aloud procedures, to provide detailed solutions to two of these

Table 1
Problems Presented to Principals

Resource Staff	Your board provides consultative services to support personnel such as subject coordinators, program consultants, social workers, and psychoeducational consultants. However, as there are increasing demands made upon teachers (relating, for example, to computer use or special education), there is more and more demand for the services of these persons. You want your school to make the most efficient use of the resource staff allocation.
Principal Entry	You have been assigned to a new position. The present principal, who is very highly regarded by staff, community, and students, is being moved to a larger school after only two years in his present assignment. The school community (staff and parents) are very displeased that a new principal has been assigned. They feel that the board has not considered their wishes. How would you enter this situation?
School Consolidation	All year, you have been a member of a committee concerned with an emotion-charged issue, that of consolidating six schools in your area into five. In April, the committee makes the decision that a neighboring school will be the one to close and that approximately one-third of its students should be attending your school next year. How would you prepare for fall?
Primary Language Program	Your school's population is now 50% Chinese. It is found that most of the Chinese students entering kindergarten and grade 1 have little or no English. You don't know if the primary language program being offered is meeting the needs of all students as well as it might.
Rumor in the Community	Next year, your school will begin to have a French immersion program. Your trustee phones to say that there is apparently a rumor abroad in the community that the regular English program will be phased out. This is not true, but a widespread rumor will be disruptive.
Setting School Objectives	Your new school is one in which staff have never been involved in the setting of school objectives and are not apparently very interested in doing so. You have come to believe that it is a very important thing for staff to set school objectives and to evaluate them at the end of the year.

hypothetical cases (the most and least *clear* or *structured* ones). Finally, they were asked to describe two problems from their own experiences which were similar in degree of clarity or structure to each of the hypothetical problems.

In the second year, a subset of 11 of the original 22 principals was chosen (five of these from among the original group of six experts, and six of these from among the original group of 16 nonexperts) to participate in interviews concerning their problem solving in group situations. The reduced sample was caused by a combination of limitations on the resources available for analysis and the need to expand the amount of data collected

from each principal. For six principals, both a small- and a large-group situation were investigated; for the remaining five, only one (small or large) meeting situation was studied. In each case, a brief preinterview was conducted with the principal prior to a meeting situation; the researcher inquired about expectations and plans with respect to a problem selected by the principal for the meeting. Then the principal taped, in the researcher's absence, the group session in which the problem was considered. Finally, using a stimulated recall technique, the researcher and principal listened together to the group meeting tape. The tape was stopped whenever the principal wished to comment on, or the researcher wanted to ask about, the principal's problem solving; their remarks were taped on a second tape recorder.

Data Analysis Procedures

Transcripts were prepared for the 44 interviews conducted in the first year and for the preinterview and stimulated recall portions of the 17 sessions conducted in the second year. Results reported in this article are based on the analysis of these transcripts, along with the audiotapes of the meeting sessions.

The specific data examined included principals' interpretations of and comments on their problem solving; observed solutions to hypothetical case problems; solutions as remembered and described by principals to actual problems they had encountered; principals' interpretations of and comments on their problem solving in group situations; and observations of principals in group problem solving situations. Given our research purposes, any one of these categories of data taken alone has certain limitations. Relying only on solutions to hypothetical case problems would prevent our understanding how principals clarify and interpret complex problems. As another example, there may be marked differences among principals in their willingness to recount the actual past situations in which they have been less than successful, and even in their ability to remember such situations. The triangulation of a variety of methods allowed us to search for patterns common across various types of data and helped to compensate for these potential limitations. However, because the possibilities of bias in the data were still sufficiently strong, the analysis was primarily concerned with identifying and explaining instances of flexibility and inflexibility per se and only secondarily with a comparison between experts and nonexperts.

We began the analysis of this large set of data by defining several categories of plausible cognitive or inferential errors, as such errors are defined in the work of Nisbett and Ross (1980) and others discussed earlier. This choice was based on considerable experience with our data as well as on a careful reading of relevant literature. These errors included:

1. *Overweighting vividness*: Situations in which principals' judgments appeared to be unduly influenced by the vividness and/or emotional interest of information.

2. *Generalizing from a small or biased sample*: Situations in which principals' judgments appeared to be influenced by a bias in sampling while collecting information.
3. *Overuse and misuse of knowledge structures*: Situations in which theories or schemas are depended on so heavily that principals fail to attend to details of the actual situation at hand, or where such knowledge structures are poor representations of external reality.

Next, without knowledge of expert, nonexpert designations, two researchers read 30 of the first year's transcripts and noted (a) instances where these errors apparently were made, and (b) instances where a "more appropriate strategy" was articulated and the error avoided. When *both* researchers independently noted the same *error* or the same *more appropriate strategy,* the instance was recorded. Criteria used in judging instances of errors or more appropriate strategies were largely based on Nisbett and Ross (1980). For this study, then, correct strategies are primarily those that involve the use of a rule which formal scientists agree is appropriate in this situation. However, in several novel situations, the researchers, and in some cases two colleagues, made judgments based on a broad reading of the problem solving literature. The latter judgments are necessarily considered somewhat tentative.

At this point, one researcher continued with the analysis of the remaining 14 first-year transcripts and the transcripts and audiotapes from the 17 second-year interviews by identifying both errors and more appropriate strategies. The researcher, still unaware of expert, nonexpert designations, also noted any other instances throughout the 61 interviews in which principals (a) appeared to be markedly responsive to specific aspects of the situation; (b) were clearly influenced by mood or aware of mood effects on problem solving; or (c) were clearly influenced by goals in problem solving or aware of their effects.

The data were then summarized, first in terms of the occurrence of various instances of cognitive inflexibility and flexibility, and then the apparent influences on them. Only then were differences between expert and nonexpert principals examined.

Results

Results from the analysis of the 61 interviews are described in two sections. In the first and major section, the elements of inflexibility and flexibility identified for all 22 principals are presented (Table 2). In the second, contrasts are briefly drawn between the six experts and the 16 nonexperts in the study.

Elements of Inflexibility and Flexibility

Errors

The first instances of cognitive flexibility and inflexibility to be described are the more *cognitive* ones, that is those observed when categories derived from Nisbett and Ross's (1980) work were applied. Unless noted otherwise, data reported in this and the two subsequent sections were based on all types of interviews. Table 2 summarizes three major categories of influen-

Table 2
Elements of Inflexibility and Flexibility

Inflexibility	Flexibility
Errors	**More Appropriate Strategies**
1. Overweighting vividness in setting priorities	• deliberate planning and priority setting • conscious perspective on role of vividness
2. Generalizing from a small or biased sample	• encourages collective work from representative group
3. Overuse and misuse of theories and schemas	
(a) Fail to see that a situation is unique or different from others in the past	• deliberate vigilance for dangers • conscious of particular features of situation
(b) Fail to determine actual causes of problem	• deliberate awareness of need to search for nonsuperficial causes
(c) Fail to see there are new problems facing principals	• has opinion that there are new problems and can identify some
(d) Fail to modify a single approach or strategy in light of situational features	• conscious awareness of need for variability and flexibility in strategies and roles
(e) Use theories or schemas that do not accurately represent reality	• awareness of individual differences • hold theories that encourage flexibility and openness
Uncontrolled Moods	**More Appropriate Strategies**
• fail to examine alternative courses of action	• recognize own limits in being able to solve some problems
• focus on own negative mood	• conscious control of mood
Lack of Responsiveness	**More Appropriate Strategies**
• miss opportunities	• take advantage of opportunities in situation
• fail to see other possible courses of action	• vigilance for opportunities to meet goals, particularly those related to students

tial *errors* (or inflexibility), along with the *more appropriate strategies* indicative of flexibility.

Errors in the first category, *overweighting vividness*, were made by six principals; all involved in some way making poor judgments regarding the determination of priorities among the various problems competing for their attention. In two cases, principals spent an excessive amount of their own time, at work and at home, trying to solve an extremely difficult and intractable personal problem of a staff member. In the remaining four cases, principals set priorities in their problem solving strictly in terms of the vividness

of the problems. For instance, one principal thought that the *only* problems needing attention were the ones that were relatively vivid or highly apparent and stated that "I keep prioritizing. When there are no problems in the in-basket or walking into my office, I go and play with the kindergartens, do this and that."

There were several more appropriate strategies mentioned by a comparable number of principals as ways of dealing with the potential error of overweighting vividness. Some expressed the importance of deliberate planning and setting clear priorities as a way of avoiding the sort of reaction to vividness exemplified above: "I spend time on overall planning and analysis. I have learned not to jump and not to assume." Good planning also was a method used to prevent vivid crisis situations or to avoid dealing with too much emotional information: "I just quite frankly don't see a strong payoff in spending time and energy raking up these feelings."

Some had a deliberate *bigger picture* perspective on issues that could otherwise have been seen as vivid. One, "this is a very poor move, and even good teachers can sometimes make a mistake," and from another, "I don't worry so much because I've found that you can blow it the odd time."

Three principals made errors of the second type, *generalizing from small or biased samples.* Each error involved collecting information from a restricted set of those people who would have some association with a decision. In one case, the principal based his interpretation of and planning for an innovative program on limited and biased information provided by strong advocates of the program. In another case, the principal was aware that his information was biased because he had deliberately chosen a group of only like-minded staff to work with him in setting objectives. Despite this, he seemed unaware of the dangers of disregarding other viewpoints.

A similar number of principals indicated use of a more appropriate strategy, that of strongly encouraging collective work from a representative group of staff, as a method for avoiding such bias. About his school cabinet, one principal noted: "They speak their minds. They don't hold back and say just what they want you to hear.... They come forward with information. With sharing like that, things come forward I haven't thought of."

By far, the most numerous cognitive errors displayed in the interviews had to do with the *overuse and misuse of theories and schemas.* As shown in Table 2, these are of five kinds. Fifteen principals made two or more of these errors, with some making several. A similar number of principals mentioned at least once a more appropriate strategy to prevent or overcome such errors; however, only six of them exhibited such strategies markedly.

One fairly common error of this type is *failing to see that a situation is unique or different from similar ones encountered in the past.* In recounting difficult situations, several principals described cases where they had failed to detect dangerous features in a situation. For example, one failed to detect that a parent complaint was more serious than usual, and another failed to detect the *real* agenda of a caller.

Another variant of this error is the tendency, observed in the responses of some principals to the hypothetical case problem, to *assume* obstacles

which are not necessarily present in a problem situation but may have been present in a similar problem encountered in the past. For instance, based on past experiences, one principal assumed there would be "anger and hate and emotion" in a situation where several parents were requesting that their children be placed in a particular class, and that there would be "strong fear and emotion" in a situation where a principal had to enter a school in which the previous principal had been popular.

More appropriate strategies in this area included a deliberate vigilance for dangerous situations ("the ones that could blow up in your face") and a conscious awareness of the need to attend to the *specifics* of a situation, "clearly listening to the situation, the problem concern, and making sure the entire professional staff understands we've got a unique situation," or "I realized this was a serious variant of a familiar problem."

A similar, but less frequent, error was *failing to determine the actual cause of a problem*. Some of these errors, reported by principals noting that "hindsight is 20/20," concerned initial misinterpretation of others' motives in situations facing the principal, while others involved the use of superficial causal explanations.

The more appropriate strategy in this situation involved a deliberate awareness that things may not be as they seem at first. As one principal said, "It was not totally clear. It was tough to know. You often don't know if it's little stuff that is the problem, or if that's just an excuse for something major."

It also involves awareness that it is necessary to analyze consciously and thoroughly causes at the outset of problem solving. Another principal said "The principal has to hold people back from jumping to solutions ... therefore let's analyze it and let's start looking at some causes.... Only then do we look at possible solutions and their ramifications."

Another source of inflexibility involves the *failure to see that there are new problems facing the principal* because overreliance on a theory or belief that there are none prevents the observation of such new problems. This attitude or opinion was expressed by some principals when they responded to a particular question, in the first interview, regarding the existence of new problems. Typical statements were: "I don't sit and think 'How am I going to handle that problem?' because I've been solving the same problem for 20 years!"; "I've never found a problem that was unclear. My steps are usually right 100% of the time"; and "No brand-new problems come to mind. I sometimes say 'I was doing this exact thing 20 years ago.'"

A more appropriate strategy with regard to this matter appears to be a conscious awareness of and vigilance for the new problems that face schools and principals. Principals who realize this indicate that "there's always something new," that "there are always new problems coming up," and tend to be able to immediately back up this opinion with concrete examples:

> Although there are always some standard problems you deal with in a school ... I have found that problems have changed in that they are more complex. Education has a much different profile, we are under attack much more than we were, and there is a much greater accountability factor. Due to the complexity of society today—and education can't divorce itself from it—life is more complex so education has to be more com-

> plex.... I have to be more of a lawyer. I have to be more facile not just with the Education Act but with other bills that relate to that, that have an impact on that. Since knowledge is increasing at a phenomenal rate, therefore my job's changing ... as curriculum changes.

Another error or source of inflexibility involving overreliance on a knowledge structure is that of *failing to modify a single approach or strategy in light of specific situational features*. Principals who do this suggest, in speaking about their own practices, that they *always* use a particular approach, often one that is extremely useful in many situations. However, they do not suggest that they are aware of situations in which such an approach is inappropriate. Most of the responses concerned with this matter came from questions in the first interview regarding principals' perceptions of their own styles. Some involved a strong reliance on *always* staying within board policy or on a particular approach with which the principal feels confident. For example, one principal stated: "I like to gather a lot of information up front, and I like, I *love* the brainstorming process. I use it all the time." Another explicitly rejected alternatives to his own commonsense strategy:

> The actual turning to a set of designed problem-solving strategies doesn't turn me on, doesn't enter into the kinds of ways I solve problems. Although I know some of them, I tend not to use it. At PD sessions, when I pick up two or three things and one contradicts the other, I tend to go back to my commonsense experiential base and it works.

More appropriate and flexible practices involve conscious awareness of the need for variability and flexibility in one's practice:

> It's important to know the people, their strengths and weaknesses ... being sensitive at the time to how close to overload they are, and when to ask them to give something, and when to not, when to back off, and when to share the burden around a bit.

One principal pointed out the need to have a contingency plan because "as you get more experienced, you realize that almost anything can happen."

Particularly in the stimulated recall interviews, some principals displayed flexibility by indicating that they were aware of the requirement for variability in the role they played in group problem solving. In some cases, this involved categorizing clearly the type of problem being considered:

> I suppose that I look at problem solving in four basic areas when it comes to presenting a decision to staff. There are the "tell" decisions ... that would just be done. There is the "sell" type ... where I would have to sell my position to staff. Then there's the "consult" area, where I would like to consult with the staff and then let them know exactly that I'm consulting with them but *I* have to make the final decision. And then the final area, which is the highest level I think, are the "share" areas, where I would outline the problem to them: here are the parameters but *together* we are going to share in the overall plan.... I have openly told my staff that if they see me confusing the terms, blow the whistle and let me know.

In other cases, it involved changing one's role in the group in response to what was occurring. One principal, in commenting on what was happening in a staff planning committee meeting, said:

> I also want to mention that it's not up to me to focus the discussion. Often I sit back and become a participant, nothing more. People don't look to me necessarily on some-

> thing like this to make a decision. They feel it's just as much their responsibility and they will focus the discussion. There are things that the principal and the vice-principal do decide if there is not much to discuss, but at the staff planning committee, if it's a proposal or concept that is *really* the responsibility of the entire group, I back out as chairman and it just carries on itself.

Later in the meeting, the principal points out that he must play a different role:

> This is the principal talking. I have to talk about regulations. Now I'm not there as a participant but now I have to ask questions. She made a statement that I just couldn't let go. As a principal, I've got something I have to be responsible for.

The final kind of error regarding the inappropriate use of knowledge structures involves *using theories or schemas that do not accurately represent reality.* The examples of inflexibility or error with respect to knowledge structures which we have outlined up to this point involve misapplication of particular schemas when the more cautious or critical application of the same schemas would have served the principal well. Nisbett and Ross (1980) point out that there are particular schemas—especially those involving stereotypes—which are "so lacking in foundation and predictive value that they almost invariably serve the user badly" (p. 40). There were a number of instances where principals made strong generalizations about their staff. For example, one said, "Teachers can't take complaints; they'll fall apart emotionally" while another said, "Teachers don't like to open themselves up and have people come into their classrooms."

Another suggestion of erroneous schemas came from the metaphors and analogies used by some principals. One regarded an educational system as analogous to a military organization; another referred to some students as "the cream" and others as "the dregs"; and a third spoke of his staff as "my horses ... I can't go anywhere without them."

Examples of more appropriate schemas came from principals who displayed a clear awareness of individual differences among staff members, of their competences and circumstances at any time. One principal stated that "people move at their own rates, and all the research shows that you cannot get all of them up to level X at the same time." Another, in referring to a staff member who was experiencing some extreme personal stress, indicated that:

> There has to be a lot of understanding on my part and the staff's. We all have to be special with her. I don't treat everyone the same. Fairness is one thing, and consistency is another, but understanding is probably more important. We are different and we all have our own situations, and I think you have to work with that aspect.

This principal was aware not only of special needs of staff but also of their accomplishments, strengths, and philosophies of education; this was also evident from a number of comments that he made during the stimulated recall interview session.

Another category of statements was much more compatible with cognitive flexibility and provided a contrast with the inflexible stereotyping described earlier. These statements included well-articulated beliefs or theories about the value of collective work in problem solving. Like the

negative, stereotype statements, these involved generalizations about all staff, but they were generalizations of a different quality. It seems plausible to suggest that principals who act on beliefs such as these will empower their staff members by increasing the possibility that most, if not all, will contribute to group problem solving. Principals who believe in the more negative generalizations ("teachers want to do their own jobs, unassisted, and principals do too") seem likely, we speculate, to prevent even those individuals who are interested in working on collective problem solving from doing so; their inflexibility may in a sense generate a self-fulfilling prophecy. Examples of the apparently more empowering beliefs are: "I have a strong belief that everyone has something to contribute. I believe in letting the person take the risk" and "I believe that people have a mindset toward doing things better. I make it clear to staff that if they can see a better way of doing things, let me know and my nose won't be out of joint."

Mood-Related Inflexibility

Instances of inflexibility in the previous section were those primarily influenced by cognitive factors. Those described in this section were associated with more motivational influences.

There were several instances in which principals' moods produced considerable inflexibility and failure to examine alternative possible courses of action as judged, after the fact, by the principals themselves. In some cases, this led to poor choices of action. In one case, a principal decided to write letters rather than seeing an irate parent in person, a choice he later regretted: "I didn't want to see him again ... he kept harassing me ... continuing to put pressure on me.... So I refused to see him in person."

In other cases, a concern with one's own mood and emotion had distracted the principal from more appropriate concerns and choices. One principal had a continuing concern with his own emotional state throughout the interviews, and made a series of comments such as, "I'm really not afraid of anyone, but I guess now I'm afraid of him," "I'd enter the situation with apprehension," "My stress level is pretty low, I have tremendous confidence, but if I have no solution, my stress level can *really* go up." Another principal repeatedly spoke of his "frustration" with the staff.

More appropriate strategies for dealing with mood influences were demonstrated by a considerable number of principals. As was the case for those concerned with not overweighting the vividness of certain information, a sense of one's own limitations in the type and number of problems it is possible to solve appears to be helpful in avoiding emotions such as frustration. For example, "There are some problems you can't do anything about. They are just too massive. It may have taken years to get that way, so how are you going to turn that around in a few hours?"

A considerable number of principals were aware of the need to keep their moods under control in group problem solving: "You have to have a process where you can get people to air their concerns and then work through the concerns in a fashion that is as impersonal as possible."

A smaller number indicated awareness of the need to keep their own mood under control when solving a problem alone. One said:

> A principal has to be a person who doesn't panic particularly easily, because so many things can go wrong, nothing ever goes exactly as planned, no matter how careful.... You have to keep thinking, all the while. That's one of the things that makes a good principal, one who can keep thinking and readjusting his or her thoughts as situations arise.

and another that:

> You have to know how to deal with things that are urgent and not panic, but use plans and click them in calmly. You know you don't have to solve any problems yourself.

Part of the *more appropriate* approach involved tackling problems with an air of calm confidence. One principal described his style: "As my wife said, 'When a situation arises, you don't seem to get all flustered ... you are cool, don't get emotional.'" He went on to say:

> I don't worry as much as I used to ... you know you can make a negative statement.... I have enough self-confidence that I think it's better that I should speak up and say what I think than worry about whether someone will put an obstacle in my way.

Goal-Related Flexibility: Responsiveness to Possibilities in Situation

In the previous sections, the instances which were clearest in the analysis and reporting were negative occurrences, indicators of cognitive inflexibility. In this section, the instances which are clearest are positive occurrences, indicators of cognitive flexibility.

Among certain principals, particularly in their remarks during the stimulated recall sessions, there were six clear examples of a phenomenon which we termed (after Hayes-Roth & Hayes-Roth, 1979) *opportunistic planning*, where the problem solver makes decisions that follow up on selected opportunities that present themselves in the situation or "takes advantage of opportunities." For instance, one principal who was dealing with the problem of improving staff resources for disciplining students solved two other problems in the process. First, he became immediately aware during the group discussion that his vice-principal had a serious personal concern with some facets of the discipline situation and made a deliberate point of discussing it with him alone very soon. Also, in considering the overall problem, he indicated the availability of a Ministry resource document for assisting with solutions and, while formulating a process for dealing with the discipline situation and introducing the document, he realized that the approach being developed would have great potential utility as a model for introducing the other documents which arrived in the school with great frequency.

In addition to these situations in which principals demonstrated specific strategies for taking advantage of an opportunity presented, some principals displayed an explicit awareness of interpreting problem situations as opportunities. One pointed out the possibilities for "image building" in several hypothetical case problems and in several problems that he had actually experienced.

This appears to be part of a more general vigilance by some principals. Particularly when faced with unstructured or unclear situations, these principals look for those specific aspects of the situation which will allow them to meet their goals, especially those to do with staff and students. These principals have a number of goals in mind and are extremely responsive to the possibilities in any situation for meeting such goals, especially their most important goals. For instance, one principal said, "Whatever it is we do, it has to be based on whatever we're doing for kids. That belief helps me make decisions.... When I look at a problem, one of the first questions I ask myself is 'How will this benefit students?'"

Evidence of unresponsiveness was of two sorts. First, in the stimulated recall interview, there were two clear cases of *missed opportunities* which the researchers noticed (although the principal, listening also, did not). Second, there were several instances in which principals seemed to be so focused on their own narrow goal that they were blind to any other possibilities in the situation. In contrast to a colleague who was well aware that a system which focused too much on avoiding mistakes is one which will be inflexible and have poor solutions, one principal described his approach to problem solving as "I know what they will support. You follow policies and procedures set down." The most dramatic example of this narrowness and inflexibility occurred during a stimulated recall interview. The principal was so consumed with "getting his own way" in a decision that he failed almost entirely to hear the strong opposition of most staff. When he stated that he wanted to get "good" information, he meant that he wanted to get information that agreed with his. There were also cases in which the principal failed to be responsive to possibilities in the situation because of an absence of *any* clear goals.

Expert and Nonexpert Patterns

The main purpose of this article is to identify and illustrate instances of inflexibility and flexibility in the practices of school principals; it is not primarily to focus on comparisons between experts and nonexperts in this domain. However, the marked differences in the patterns displayed by these two groups merits brief attention.

Before considering these results, it should be noted that only some of the principals in both the expert and nonexpert groups were *good informants,* while about half of the group overall made few statements indicative of either inflexibility or flexibility. In general, the good informants seemed to be at the extremes of the *expertness* distribution.

Among the expert group, four of the six principals clearly demonstrated a variety of instances of flexibility and the other two a smaller number of such instances; none of these six experts showed any instance of inflexibility. Among the nonexpert group, five of the 16 demonstrated a marked variety of instances of inflexibility and no instances of flexibility. Another nine of the nonexpert principals demonstrated some instances of inflexibility and a few instances of flexibility. Of the remaining two nonexperts, one indicated no instances of inflexibility and a few of flexibility, while the other showed some inflexibility but considerable attention to

flexibility. That is, the data were clearest, most informative, and least inconsistent for the expert and nonexpert extremes.

In summary, experts avoided errors, controlled their moods, and were responsive to opportunities in the situation. Nonexperts, at least those at the least effective extreme, made errors, were unable to control their moods, and were unresponsive to opportunities available in the problem setting.

Discussion

This study found evidence for three main elements of cognitive flexibility. First, such flexibility involves a total avoidance of cognitive errors and an ability, noted by many authors (e.g., Morine-Dershimer, 1986; Nisbett & Ross, 1980; Schön, 1983) to make fine discriminations among details of particular situations. Second, cognitive flexibility involves controlling one's negative moods and approaching problem situations with an air of calm confidence. Klemp and McClelland (1986), in studying characteristics of intelligent functioning among managers, found that the *competence* of self-confidence was absolutely essential and served to drive the other intellectual competences. Third, cognitive flexibility involves being responsive to the possibilites in the situation, affording a clear illustration of what Sternberg and Wagner (1986) would regard as *practical intelligence.* These authors use Neisser's (1976) definition of "intelligent performance in natural settings ... as responding appropriately in terms of one's long-range and short-range goals, given the actual facts of the situation as one discovers them" (p. 137).

It should be noted that cognitive flexibility never involves being overresponsive or spineless. According to other data we have collected, expert principal problem solvers have core values, beliefs, and goals that are inviolate. That is, they display extreme cognitive flexibility, but they are always guided by a coherent set of values (Begley, 1988; Leithwood & Stager, 1989).

Our data indicate that at least several types of cognitive flexibility and inflexibility, found among other widely disparate groups, can also be found among elementary principals as they do their work. These data also illustrate the forms such flexibility and inflexibility may take in the specific domain of elementary school administration. Such findings are potentially significant for the improvement of administrative performance. For example, identifying *errors,* in the Nisbett and Ross (1980) sense, creates the possibility of designing specific training in the use of more appropriate strategies. As another example, principals might also be assisted in becoming more sensitive to their overuse of otherwise helpful heuristics. Several crucial questions must be answered, however, before such potential can be pursued. One question concerns the teachability of error avoidance and other aspects of problem solving. We are optimistic that this is possible, to some degree, and are presently attempting to do it in an experimental context. But others are much more skeptical, and there is virtually no empirical evidence bearing directly on the question.

In our view, a second question points to the major limitations of the present study; that is, our adoption and application of criteria for defining cognitive flexibility and inflexibility (including errors) without any direct evidence of the relationship between such criteria and the problem solving effectiveness of principals. The question is: Does flexible cognition, as Showers and Cantor (1985), Nisbett and Ross (1980), and others define it, actually make a principal a better administrative problem solver? Our modest attempt to address the question in this study involved briefly comparing samples of expert and nonexpert principals. That comparison suggested a much higher incidence of cognitive flexibility among expert principals. But this evidence is correlational in nature and hence only weak support for the importance of such flexibility for principals' problem solving. Further research is needed to understand fully the role that cognitive flexibility plays in expert administrative problem solving.

Acknowledgments

This research was supported by grants from the Social Sciences and Humanities Research Council of Canada and from the Ontario Ministry of Education. We are indebted to Sue Bailey, Durham Board of Education, for her assistance in the data analysis. An earlier version of this paper was presented at the Annual Meeting of the American Educational Research Association, New Orleans, April 1988.

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The Alberta Journal of Educational Research *Vol. XXXV, No. 3, September 1989, 237-254*

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The Impact of Family Form on Perceptions of Children's Functioning

The purpose of the study was to determine the impact of family form on perceptions of early adolescent children. The sample was selected from schools in middle socioeconomic status neighborhoods and consisted of 136 children from intact families, 42 children from one-parent families, and 34 children from remarried families. The various perceptions of children's functioning were investigated by using internal measures completed by children (Culture-Free Self Esteem Inventory, Family Assessment Measure, Family Satisfaction Scale) and external measures completed by teachers and parents (Health Resources Inventory, School Report Grades). The data were analyzed using both traditional confirmatory and the more recent exploratory procedures. The results of the study indicated that teacher and parent ratings of children from intact families were more favorable than their ratings of children from one-parent and remarried families, but children's perceptions of themselves and their families were similar across family form. Furthermore, the results of the exploratory data analysis suggest that it would be quite difficult for teachers to distinguish between children from the three family form groups without prior knowledge. It was concluded that family form is perhaps more important for adults than for children. Finally, the results point to the need for further research regarding the relevance of family process variables (interpersonal interactions among children and adults) to the functioning of early adolescent children from one-parent and remarried families.

A topic of increasing interest and importance to family practitioners and researchers is the impact of family form on the functioning of children. The term form, as it is used here, refers to the type of family arrangement in which parents and children live: intact (biological mother, biological father, and children); one-parent (biological mother or biological father and children); remarried (biological mother or biological father, stepmother or stepfather, and children). The present study compares early adolescent children living in intact, one-parent, and remarried families according to their self-esteem (self-perceptions), how they perceive the processes or interactional aspects existing in their families (perceptions of family), children's satisfaction with their families (perceptions of family), teacher ratings of children's behaviors (teacher perceptions), parent ratings of children's behaviors (parent perceptions), and children's academic achieve-

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ment (cognitive performance). These aspects have been selected for the study because: (a) they include children's functioning in school and in their homes; (b) they provide both internal (child perceptions) and external (teacher, parent perceptions) indicators of children's functioning; and (c) they provide indicators of cognitive, affective, and behavioral functioning.

Many research studies have been conducted on various aspects of children living in intact, one-parent, and remarried families but findings from previous research studies are generally inconsistent and inconclusive (Camara, Baker, & Dayton, 1980; Goetting, 1983). According to Mensink (1987), there are three explanations for inconclusive findings in the research literature on children's postdivorce functioning: (a) clinical and nonclinical samples could show different results; (b) intervening variables (e.g., IQ and SES) may differentially influence different studies; and (c) different results could be found depending on the type of measurements used (e.g., internal child perceptions or external parent and teacher perceptions). Amato and Ochiltree (1987) compiled 10 methodological limitations of previous research studies on children's postdivorce functioning. The present study was designed to meet seven of the limitations:

1. the sample is not clinical but rather it was selected from the general population,
2. children who lost a parent from death were excluded from the sample,
3. intact two-parent families were distinguished from remarried stepfamilies,
4. the social class variable was partially controlled in that children were selected from schools in middle-class neighborhoods,
5. two age levels were analyzed by selecting students from Grade 6 and Grade 9,
6. child strengths were assessed by using the Health Resources Inventory, and
7. multiple child outcome measures were used (cognitive, affective, behavioral).

The impact of family form on children's functioning is not yet fully known due to equivocal findings from existing studies on this topic. Accordingly, the purpose of the present study was to determine whether family form is an important variable to consider with respect to the functioning of early adolescent children.

Although research on children's functioning in various family forms has often been inconsistent, there have been a few areas of progress during the last 10 years. Two key factors appear to enhance children's functioning in any family form: (a) parental harmony (Ellison, 1983; Jacobson, 1978a; Kurdek, Blisk, & Siesky, 1981; Nelson, 1981; Rosen, 1979) and (b) positive interactions between children and their custodial and noncustodial parents (Hetherington, 1979; Jacobson, 1978b; Kurdek & Siesky, 1980; Pett, 1982). Various researchers (Emery, 1982; Goetting, 1983; Hetherington, 1979; Longfellow, 1979; Marotz-Baden, Adams, Bueche, Munro, & Munro, 1979; Rubin & Price, 1979; Schlesinger, 1977) conclude that children may be less

affected by family form than by the ongoing relationships between and among parents and children (family process variables). Accordingly, children's perceptions of family processes were included in the present study in addition to the traditional cognitive, affective, and behavioral measures.

Method

Subjects

The population from which the sample was selected consisted of Grade 6 and Grade 9 children as well as their teachers and parents from middle socioeconomic status neighborhoods in Edmonton, Alberta, Canada. Schools were selected on the following basis: (a) each school was located in the Edmonton Metropolitan Census Tract, (b) each school was located in the middle socioeconomic status neighborhood based on the $26,000 to $35,000 range of average family income, and (c) principals had to give permission for the participation of their schools in the study. In total 18 schools were contacted and principals of 13 schools agreed to participate. The researchers requested permission from the parents of all Grade 6 and Grade 9 students in the 13 schools (N=950). Of the original 950 parents, 214 (23%) agreed to participate. Students were classified into the three family forms (intact—lives with two biological or adoptive parents; one-parent—lives with one biological parent; remarried—lives with one biological and one stepparent) on the basis of information provided by their parents. Two students were dropped from the analysis because they did not live in an intact, one-parent, or remarried family.

The final sample included 136 students from intact families, 42 students from one-parent families, and 34 students from remarried families. The number of subjects in each family form, grade, and gender is presented in Table 1. The sample was quite balanced regarding grade and gender except that there were considerably more male than female students from Grade 9 one-parent families in the sample. Student scores on the Canadian Cognitive Abilities Test (Thorndike, Hagen, & Wright, 1982) and the Lorge-Thorndike Intelligence Test (Lorge, Thorndike, Hagen, & Wright, 1967) were collected to determine if the children differed on IQ (group) across family form. No significant differences were found among the three groups

Table 1

Number of Subjects in Each Family Form, Grade, and Gender

	Grade 6		Grade 9		
Family Form	Male	Female	Male	Female	Total
Intact	30	39	30	37	136
One-Parent	10	11	17	4	42
Remarried	5	4	12	13	34
Totals	45	54	59	54	212

(intact, one-parent, remarried). As a result, students from the three family forms were considered similar with respect to IQ for the data analyses.

Instruments

1. Culture-Free Self Esteem Inventory (SEI), Form B (Battle, 1981). The SEI contains 30 items, five of which comprise the lie scale. The instrument without the lie scale contains 25 items intended to measure an individual's perception in four areas: general self, social, school, and parents. The items are divided in two groups: those which indicate high self-esteem and those which indicate low self-esteem. The individual checks each item either *yes* or *no*. According to Battle, the instrument has content and concurrent validity and estimates of test-retest reliability range from .79 to .92 (Battle, 1981).
2. Family Assessment Measure (FAM) (Skinner, Steinhauer, & Santa-Barbara, 1983). The FAM is a self-report instrument that provides quantitative indices of family strengths and weaknesses. Family members are asked to indicate (strongly agree to strongly disagree) how well each item describes their family. The instrument is based on a process model of family functioning that integrates different approaches to family therapy and research. The FAM has three scales: General, Dyadic Relationship, Self. Only the General Scale was used for the present study due to time restrictions. The General Scale (50 items, nine subscales) focuses on the level of health/pathology in the family from a systems perspective and provides an overall level of family functioning using the seven family process measures (subscales) and two response style subscales (Social Desirability and Denial). The seven measures relating to the process model are (a) task accomplishment—the achievement of a variety of basic, developmental, and crisis tasks to reach biological, psychological, and social goals of the family; (b) role performance—the differentiation and performance of various roles which are prescribed and repetitive behaviors including a set of reciprocal activities with other family members; (c) communication—the exchange of information and achievement of mutual understanding among family members; (d) affective expression—the content, intensity, and timing of feelings among family members; (e) affective involvement—the degree and quality of family members' interest in one another; (f) control—the process by which family members influence each other to sustain ongoing functioning or to allow the family to adapt its functioning in response to changing task demands; and (g) values and norms—the cultural and family background against which all basic processes must be considered. The seven scales comprise 35 items in total which were used in the present study. Estimates of internal consistency for the General Scale are .93 for adults and .94 for children while validity studies are still in progress (Skinner et al., 1983).
3. Family Satisfaction Scale (Olson & Wilson, 1982). The Family Satisfaction Scale is a self-report instrument which assesses family satisfaction on the dimensions and subscales of family cohesion (emotional bonding)

and family adaptability (ability to change) of the Circumplex Model of family functioning (Olson, Russell, & Sprenkle, 1983). The Family Satisfaction Scale is a 14-item instrument on which subjects respond to each item about their family on a five-point Likert scale: 1=dissatisfied, 2=somewhat dissatisfied, 3=generally satisfied, 4=very satisfied, 5=extremely satisfied. Eight of the items load on family cohesion and six items load on family adaptability. An estimate of internal consistency of the total instrument is .92 and test-retest reliability is .75 (Olson & Wilson, 1982).

4. Health Resources Inventory (HRI, Gesten, 1976). The HRI measures perceptions of competence-related behavior of children. For the present study, four of the 54 items were omitted and six items were slightly modified to adjust the HRI for teacher and parent completion. The revised inventory contains 50 items which are assigned a rating of 1 to 5 (1=not at all, 2=a little, 3=moderately well, 4=well, 5=very well) according to how well the behavior describes the child. The HRI contains five subscales: (a) good student—items related to effective learning; (b) gutsy—items reflecting adaptive assertiveness or ego strength; (c) peer sociability—items reflecting effective interpersonal functioning; (d) rules—items reflecting the child's ability to function within the constraints of the environment; and (e) frustration tolerance—items reflecting the child's ability to cope with failure and other social pressures. Although reliability and validity estimates are not presented by Gesten, Sattler (1982) suggests that reliability and validity estimates of the instrument are satisfactory.
5. School Report Grades. The academic report includes grades in language arts, mathematics, social studies, and science for all students in the district. Scores on a 100-point scale were converted for the study to a 1 (low) to 5 (high) rating on the basis of the Edmonton Public Schools standard grid—0 to 39=1, 40 to 49=2, 50 to 64=3, 65 to 79=4, 80 to 100=5.

Procedure

A consent form, the Health Resources Inventory, and a background information form were mailed to parents. Next, the Culture-Free Self Esteem Inventory, the Family Assessment Measure, and the Family Satisfaction Scale were administered to the participating students in their classrooms. At the same time, the Health Resources Inventories were given to the homeroom teachers for their completion. Also, group ability test scores and school report grades were collected from student records in each school.

Results

Investigation of Family Form—Analysis of Variance (ANOVA) Results

A three-way analysis of variance model was used for the initial analysis of each child functioning variable—3 (family form: intact, one-parent, remarried) by 2 (grade: 6, 9) by 2 (gender: male, female). The SPSSx Program was used to compute the ANOVA (SPSS, Inc., 1986). The *F* values of each interaction and main effect are displayed in Table 2. Multiple comparisons

Table 2
ANOVA Summary of *F* Values

Variables	Form	Grade	Gender	Form by Grade	Form by Gender	Grade by Gender	Form by Grade by Gender
Self-Esteem Inventory	4.77***	3.05	2.57	0.49	0.10	0.45	2.17
Family Assessment Measure	0.37	0.80	0.31	3.26*	1.01	0.68	1.41
Family Satisfaction Scale	1.22	3.56	4.50*	1.15	0.48	1.90	0.47
Health Resources Inv Teacher	9.59***	0.83	4.86*	1.91	0.52	0.04	0.84
Health Resources Inv Parent	7.40**	0.33	7.94**	0.00	0.32	0.18	0.23
School Report Grades	8.37***	0.75	0.74	0.91	1.45	1.45	0.10

*p < .05
**p < .01
***p < .001

between the means of each level were calculated using the Tukey HSD procedure (Kirk, 1968).

None of the three-way interaction effects was significant. The only significant two-way interaction effect was the family form by grade effect on the Family Assessment Measure ($F=3.26$, $p<.05$). The Tukey HSD test showed that Grade 6 students from remarried families had a higher mean score on the Family Assessment Measure than the Grade 9 students from remarried families (mean=107.9 and 94.5, respectively). Only one interaction was significant and, as a result, emphasis will be placed on the results of the main effects.

The following main effects for family form were found significant: Self-Esteem Inventory ($F=4.77$, $p<.01$), Health Resources Inventory Teacher ($F=9.59$, $p<.001$), Health Resources Inventory Parent ($F=7.40$, $p<.01$), and School Report Grades ($F=8.37, p<.001$).

The results of the comparisons of means are presented according to the groups compared: (a) intact and one-parent, (b) intact and remarried, and (c) remarried and one-parent. Children from intact families received a higher mean score on teacher ratings and school grades than children from one-parent families. In addition, children from intact families received a higher mean score on self-esteem, parent ratings, and school grades than children from remarried families. Finally, children from remarried families received a higher mean score on teacher ratings than children from one-parent families. The means and standard deviations of the child functioning

variables across family form are presented in Table 3. With the exception of the mean difference on self-esteem between children from intact and remarried families, the major differences regarding family form between the three groups are external to the children (teacher ratings, parent ratings, and school grades) in favor of the intact family group.

There were no main effects for grade. The following main effects for gender were found significant: males received a higher mean score on family satisfaction than females ($F=4.50$, $p<.05$), females received a higher mean score on Health Resources Inventory Teacher (teacher rating) than males ($F=4.86$, $p<.05$), and females received a higher mean score on Health Resources Inventory Parent (parent ratings) than males ($F=7.94$, $p<.01$). The means and standard deviations of the child functioning variables across gender are presented in Table 4. On the basis of these results, it would seem that external observers such as teachers and parents rate females higher than males.

In summary, three major statements can be made on the basis of the ANOVA results. First, children from intact families received higher mean scores than children from one-parent families on two variables (teacher ratings and school grades), and children from intact families received higher mean scores than children from remarried families on three variables (self-esteem, parent ratings, and school grades). This means that family form is an important variable regarding the perceived functioning of children. Such a conclusion is primarily true when child functioning is considered from an external perspective (teachers and parents). Second, there were no significant differences between children from intact, one-parent, and remarried families on the variables tapping children's perceptions of

Table 3
Means and Standard Deviations of Child Functioning Variables Across Family Form

	Intact			One-Parent			Remarried		
Variables	Mean	Std Dev	N	Mean	Std Dev	N	Mean	Std Dev	N
Self-Esteem Inventory	20.1	3.26	135	19.2	3.88	42	18.4	4.41	33
Family Assessment Measure	100.7	13.59	125	100.2	13.60	35	98.2	15.56	29
Family Satisfaction Scale	48.5	9.71	135	47.7	7.91	41	45.3	10.74	32
Health Resources Inv Teacher	191.8	29.12	124	162.5	45.66	39	187.3	35.00	27
Health Resources Inv Parent	193.7	28.86	134	178.7	31.24	41	175.3	26.63	33
School Report Grades	16.1	3.33	134	13.7	3.88	42	14.2	3.98	33

Table 4
Means and Standard Deviations of Child Functioning Variables Across Gender

Variables	Male Mean	Male Std Dev	Male N	Female Mean	Female Std Dev	Female N
Self-Esteem Inventory	20.0	3.81	102	19.3	3.44	108
Family Assessment Measure	100.7	13.51	92	99.7	14.24	97
Family Satisfaction Scale	49.1	9.24	103	46.6	9.78	105
Health Resources Inv Teacher	177.9	39.05	92	192.0	30.97	98
Health Resources Inv Parent	181.5	31.12	102	194.0	24.88	106
School Report Grades	14.9	3.71	101	15.6	3.65	108

their families—family process and family satisfaction. Children's families provide similar interactions regardless of family form. Third, the results did not vary significantly on either age or gender.

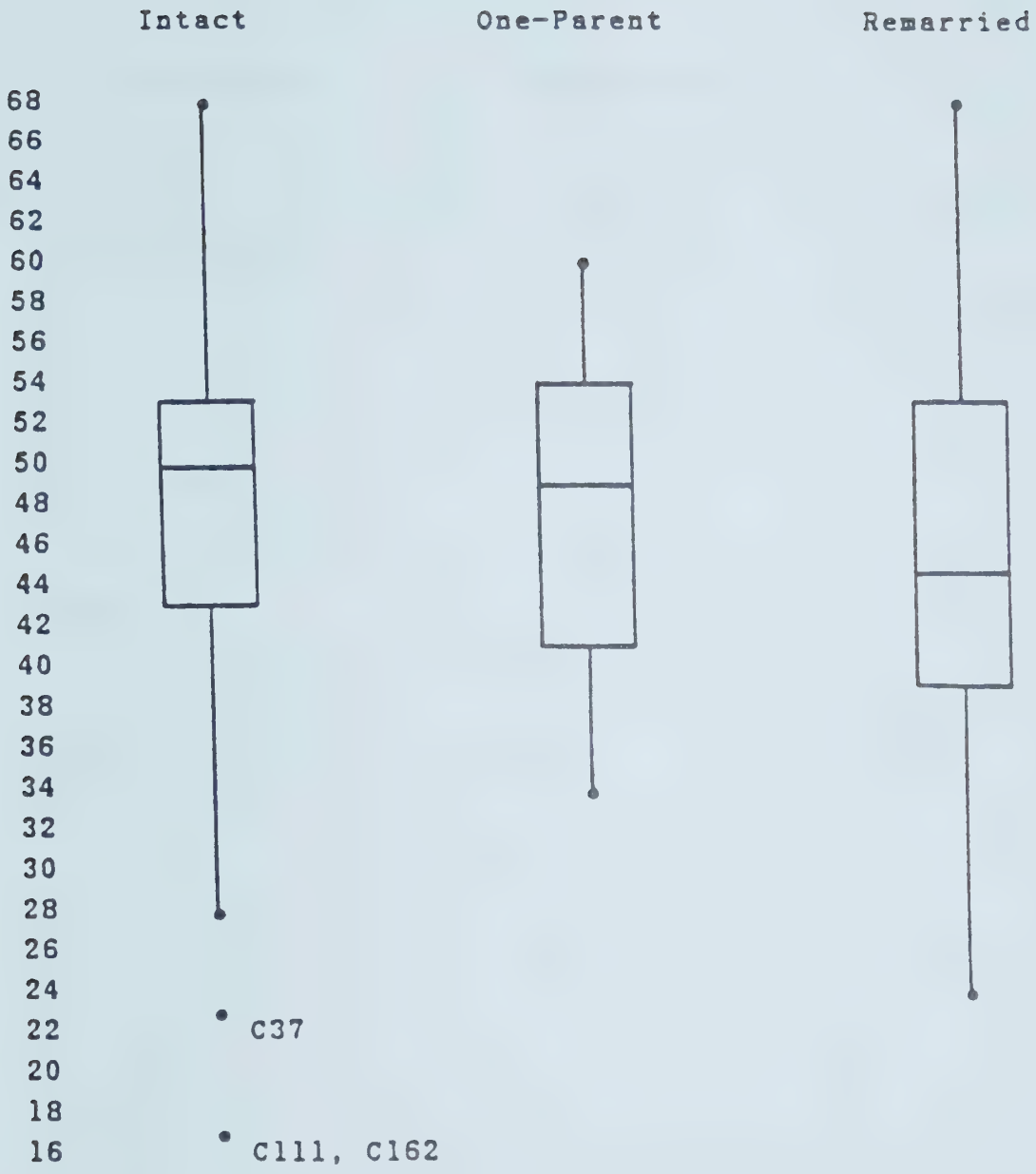
Investigation of Family Form—Exploratory Data Analysis (EDA) Results

The results of the six measures of children's functioning (Self Esteem, Family Assessment Measure, Family Satisfaction Scale, Health Resources Inventory Teacher, Health Resources Inventory Parent, and School Report Grades) were compared across family form (intact, one-parent, remarried) using box and whisker graphs or boxplots (Tukey, 1977). These were constructed for the six variables and are presented in Graphs 1 to 6.

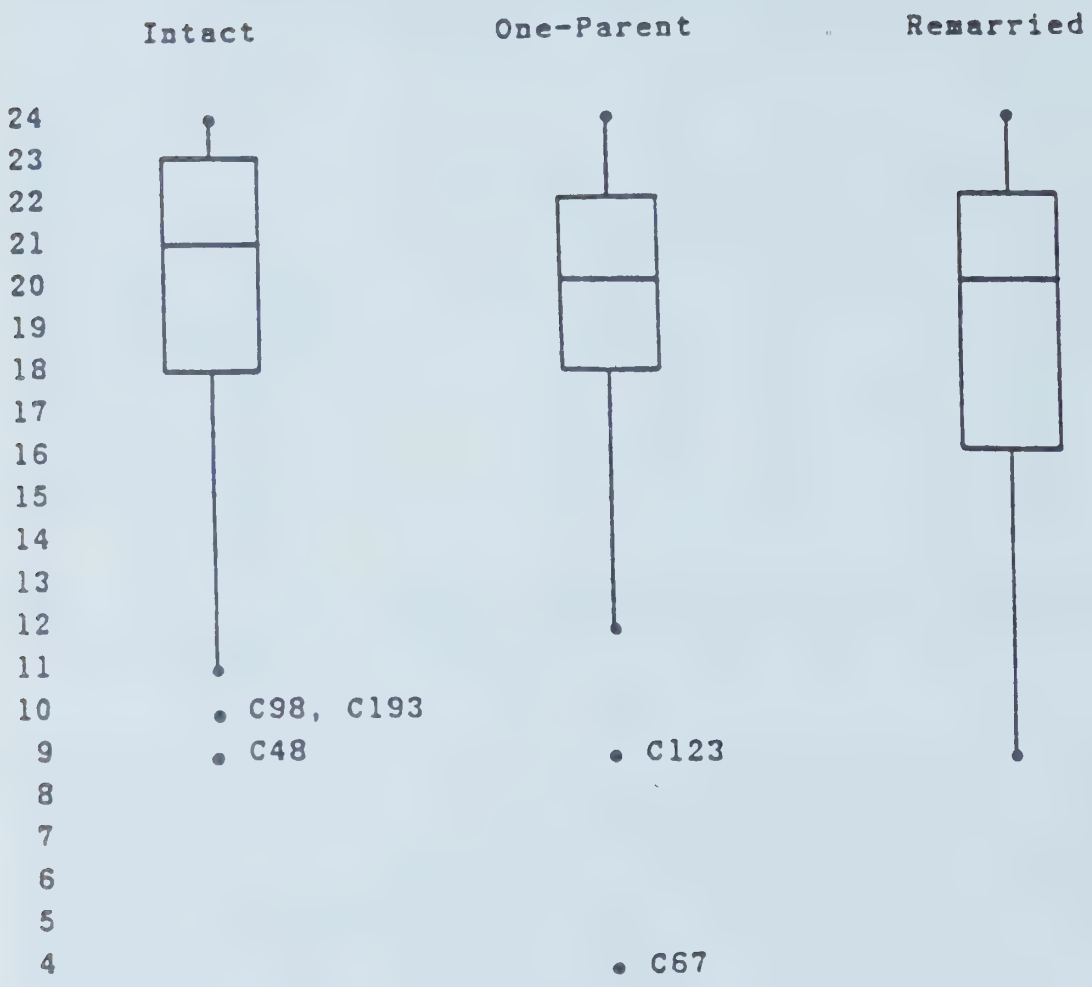
The boxplots provide clear pictorial representations of the central tendency (median) and spread of the six variables under study. The box consists of scores between the first and third quartiles or the middle 50% of the distribution including a line which divides the box into two separate parts and represents the median of the data array. The whisker extends from the box to the extreme values (highest, lowest, adjacent). If values lie outside upper or lower fences (rule of thumb is 1.5 times the distance between the upper and lower quartiles) then the whisker extends to the adjacent value and the outlier scores are marked by dots. The outliers are indicated by C (ID#) on Graphs 1 to 6.

The aim of the exploratory analysis was to compare the shape and spread of the distribution across groups as well as to note exceptional points. It was thought that while the trends across groups could be compared by the analysis of variance procedure, individual anomalies could go undetected and yet be indicative of low frequency effects.

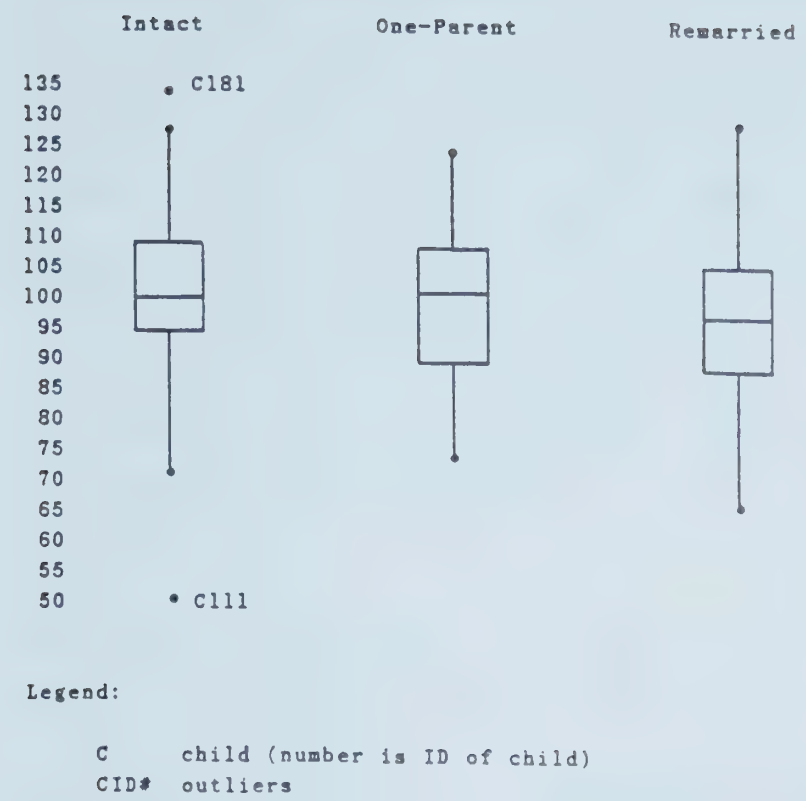
The following observations can be made about the boxplots. First, the three family form groups are not vastly dissimilar with respect to the spread of the distributions of the six variables. The majority of the children from the sampled intact, one-parent, and remarried families are at about the



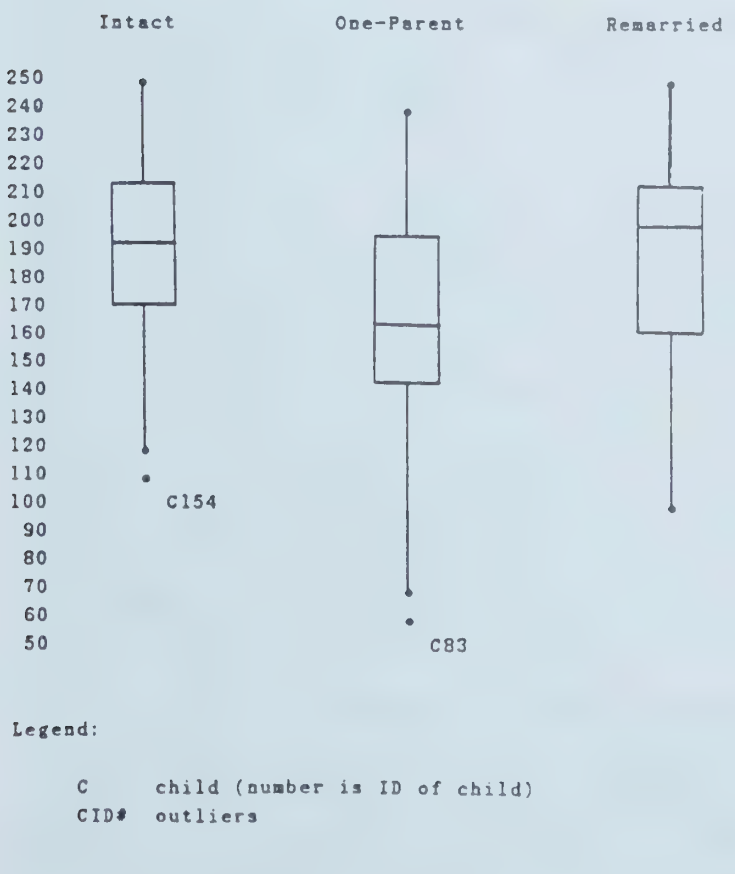
Graph 1: Boxplot of family satisfaction



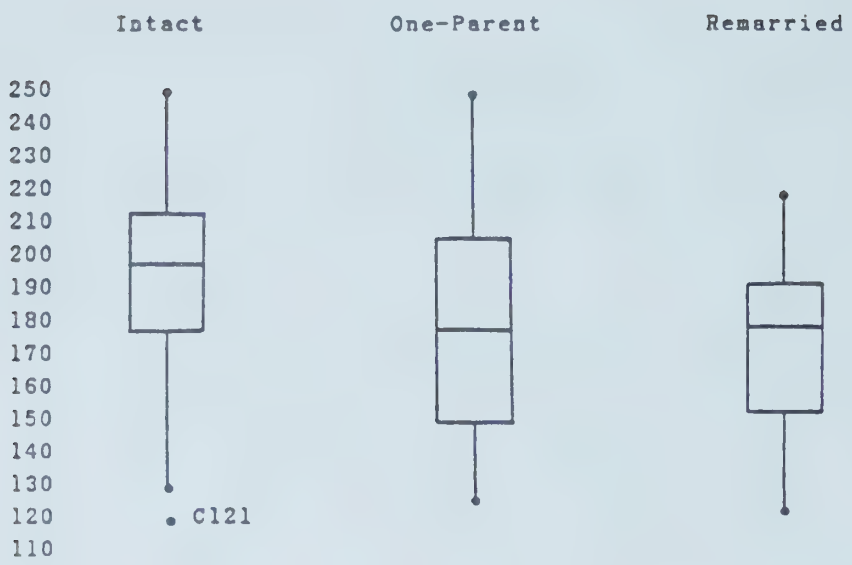
Graph 2: Boxplot of self-esteem



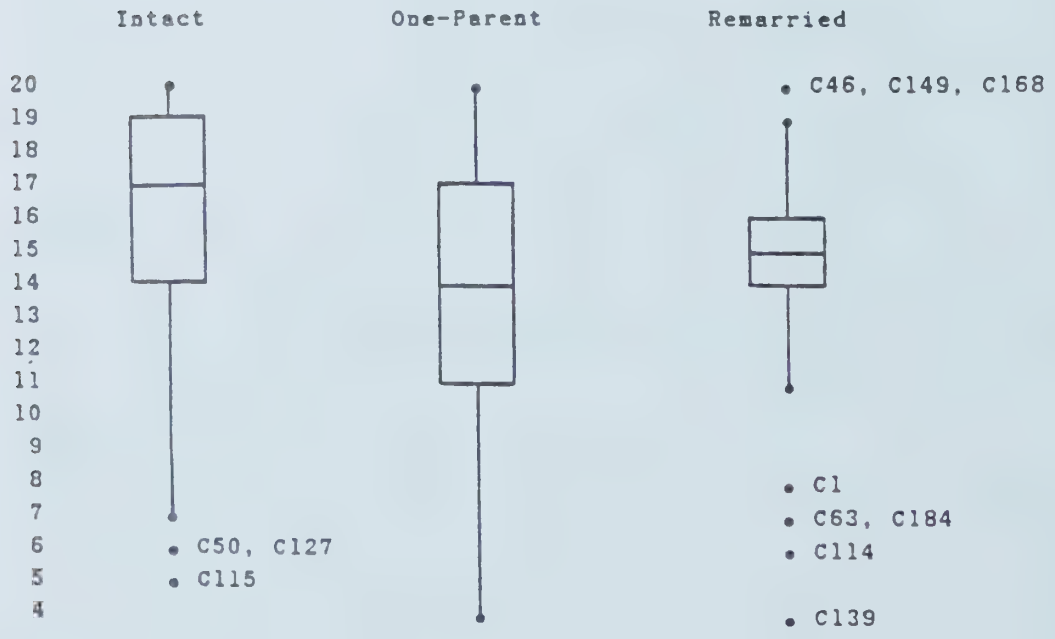
Graph 3: Boxplot of family assessment measure



Graph 4: Boxplot of health resources inventory teacher



Graph 5: Boxplot of health resources inventory parent



Graph 6: Boxplot of school report grades

same level on the six variables. Second, with only one exception (Child #111 on FAM and FS—Graphs 2 and 3), there are no children who are outliers on two or more variables. That is, the samples do not contain extreme low or high values of an individual over many variables. Therefore, the sample does not contain children with severe problems in many areas (achievement, behavior ratings, self-esteem, etc.). This finding provides confirmation of the nonclinical nature of the sample. Third, with the exception of the remarried group on school grades (Graph 1), the whiskers (extent of spread) are similar across family form. This finding provides further confirmation of the similarity of the sample across family form. Finally, it would appear that there is greater similarity among the medians and distributions of the self-esteem (Graph 1), child perception of family processes (Graph 2), and child satisfaction (Graph 3) variables across family form than for teacher perceptions (Graph 4), parent perceptions (Graph 5), and school grades (Graph 6).

The differences observed on Graphs 4, 5, and 6 are as follows: (a) the boxplots of teacher ratings, parent ratings, and school grades show higher scores for children from intact families than for children from one-parent families; (b) the boxplots of parent ratings and school grades show higher scores for children from intact families than for children from remarried families; and (c) the boxplot of teacher ratings shows higher scores for children from remarried families than for children from one-parent families. These results are generally consistent with the ANOVA results except differences on self-esteem are not apparent in examining the boxplot (Graph 1) and the boxplot of the intact group on parent ratings (Graph 5) shows higher scores than the boxplot of the one-parent group.

The more recent exploratory procedures provide additional information to the traditional ANOVA results because EDA results are less affected by extreme scores and because entire distributions of variables can be compared which, in turn, provides a more complete picture of the results. Also, EDA results are more sensitive to exceptional points. In short, the results of the EDA indicated that the children from each family group belong to the same population of children—boxes and extensions of whiskers were not vastly dissimilar. These results suggest that it would be difficult for a teacher to distinguish between children living in various family forms without prior knowledge. In addition, the EDA results further confirm the finding of the ANOVA procedure that children from various family forms do not perceive themselves as being different (internal focus) but that teachers and parents perceive children from various family forms as being different (external focus), in favor of children from intact two-parent families.

Relationships of Variables—Pearson Correlations

Correlations calculated among the perceptions of child functioning variables are presented in Table 5. An outstanding feature of the Pearson correlations is that there are two clusters of variables. The child perception variables (self-esteem or perception of self, perception of family process, family satisfaction) are highly correlated with each other and the external percep-

Table 5
Pearson Correlations Among the Dependent Variables

	Self Esteem (N)	Fam Assess (N)	Fam Satis (N)	HRI Teach (N)	HRI Parent (N)
Family Assessment Measure	.51*** (188)				
Family Satisfaction Scale	.42*** (207)	.70*** (187)			
Health Resources Inv Teacher	.27*** (189)	.13* (170)	.12 (187)		
Health Resources Inv Parent	.25*** (206)	.14* (186)	.10 (205)	.38*** (188)	
School Report Grades	.29*** (207)	.12 (187)	.10 (205)	.61*** (188)	.40*** (205)

*p < .05
***p < .001

tions of child variables (teacher rating, parent rating, school grades) are highly correlated with each other. The other correlations are below .30. Therefore, the Pearson correlations show two major clusters—one internal and one external to children. The implications of this distinction are discussed in the next section.

Discussion

The perceptions of early adolescent children's functioning selected for the present study clumped into two factors—a weak external (outsider) factor and a stronger internal (insider) factor. The factors can be considered relevant in understanding the results of the study because the findings of the study were different for each factor. In general, children from intact families received more favorable external ratings than children from one-parent and remarried families. Accordingly, on the basis of these variables of children's functioning, one would assert that children from a nonclinical, middle-class population differ across family form in favor of the intact, two-parent family form. However, on the basis of internal (child) perceptions of themselves and their families, one would assert that family form does not differentiate or distinguish children from intact, one-parent, and remarried families.

One interpretation of these findings is that teachers and parents expect children from one-parent and remarried families to show problems. Santrock and Tracy (1978) found that the behavior on a videotape recording of the same child was perceived more positively by teachers when they were told that the child lived in an intact family instead of in a divorced family. These results may indicate that children are less influenced by fami-

ly form than their teachers or parents. That is, it could be that the external perceptions of children who have experienced family transitions are congruent with a negative bias toward divorce and alternative family forms as opposed to a *true* indication of children's functioning. Moreover, the external perceptions of children's functioning in the present study might be a measure of adult experiences and perceptions of family transitions.

Of course, an alternative explanation of the findings is that the teacher and parent perceptions are accurate and children's perceptions are an inaccurate map of *reality*. This explanation is suspect for two reasons. First, there was no reason or possible gain for children to misrepresent their perceptions. Second, a person's perceptions of relationships or of an event are, in fact, reality for that individual. In discussing the ideas of Bateson and Maturana, Andersen (1987) states that "both agree that it is the observer who generates the distinctions we call 'reality.' One's picture of or knowledge about the world will be the basis for one's attitude to it"(p. 416). Perhaps the sampled children's perceptions (internal perspective) are representative of a *child's map* of reality and the sampled parents and teachers' perceptions (external perspective) are representative of an *adult map* of reality.

The findings of the present study suggest that, despite family transition, children living in one-parent and remarried families indicate that they are as satisfied with their families as children living in intact families. Children's perceptions of themselves and of themselves in their families provide insight into their functioning. Internal perceptions or the view one has of oneself and of the interactions between oneself and those in one's external world (family, school, etc.) could be considered more indicative of children's functioning than external perceptions. The way a person perceives her or his peculiar experiences is a core conceptual issue of the family sociological theory of symbolic interactionism. Specifically, the key construct of definition of the situation is relevant to the findings of the present study. Stryker and Statham (1985) state that "the underlying premise of symbolic interactionism is that the subjective aspects of experience must be examined because the meanings people assign to things ultimately organize their behavior" (p. 320). Persons create the meanings to which they respond through the process of social interaction. According to Stryker and Statham, "that meaning is derived from an interpersonal process implies that reality is defined through that process rather than independent of it" (p. 321). The findings of the present study suggest that the family process or interactional aspects which contribute to children's family definition are independent of family form. That is, children did not differ with respect to family perceptions across family form.

If children do not differ significantly across family form, then how does one account for the negative findings from many previous studies regarding the effect of divorce on the functioning of children (Marotz-Baden et al., 1979)? First, as is pointed out previously, external perceptions show child problems, and many studies have used external measures of child behavior. Second, many studies have been conducted on clinical rather than norma-

tive samples. Third, many researchers conducting studies in the area of children's functioning and family transitions over the last 10 years conclude that family form may be less important than family process (relationship patterns) to children's functioning (Amato & Ochiltree, 1987; Emery, 1982; Hess & Camara, 1979; Hetherington, 1979; Longfellow, 1979, & Marotz-Baden et al., 1979). In discussing the results of their study, Amato and Ochiltree (1987) state the following:

> Although significant differences were obtained between family types, the family type variable only accounted for small proportions of the variance in each measure.... Therefore, in future work we intend to examine family process measures to see what the intervening mechanisms might be which account for the differences in family types noted earlier. It is anticipated that the levels of family conflict and the quality of parent-child relationships will be important variables in this analysis. (p. 94)

According to the findings reported in the present study, family process, at least from the perspective of children, can be of similar quality regardless of family form. It seems that family process in postdivorce families is certainly worth serious investigation.

There is a great deal of optimism involved in the hypothesis that family process is more important to the functioning of children than family form. To explain, families have been and will be undergoing changes in form. That families change through divorce and remarriage will likely not change. On the other hand, processes in families do change and are amenable to changes. Consequently, from this perspective, children's functioning is more dependent on a condition subject to change rather than something unamenable to change; herein lies the optimism.

A final implication of the present study is a practical matter directed to those who work with children and families experiencing transition. If children's definition of the situation organizes their experience and if their definition of the situation is dependent on social interactions, then it is crucial for therapists and mental health workers to be open to the positive aspects of family transition. Wilcoxon (1985) states the following on this topic:

> A counselor's awareness of healthy family characteristics could be quite valuable in providing assurance that healthy family processes are not completely eroded, but rather are undergoing adjustment and change. In fact, it is quite possible that these very characteristics have brought the family to its current stage of readiness for entry into a new phase of growth and development. (p. 498)

Mental health workers, therapists, and educators can provide hope for children and families by offering supportive affirmation during transitions. The supportive affirmation will, in turn, help to enhance a positive definition of family transition, and so forth.

In conclusion, the results of the present study point to the relevance of considering internal variables in addition to external variables regarding the functioning of children from various family forms. It was suggested that symbolic interactionism theory might help in understanding the relationship between internal perceptions and the experiences of children in terms of their functioning. The findings indicated that family form might not be

the most important variable to consider in understanding children's functioning. Finally, the results point to the need for further research on the relevance of family process to the functioning of children from any or all family forms.

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The Alberta Journal of Educational Research *Vol. XXXV, No. 3, September 1989, 255-266*

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Program Advice Given to Canadian Adolescents: Effects of Student Gender, Ethnicity, and Achievement

This study examined the effects of gender, ethnicity, and achievement on ratings of appropriateness of type of high school program (academic, commercial, vocational) for grade 9 students. The subjects—third- and fourth-year undergraduate Education students—were each asked to evaluate a case folder in which gender (female, male, not stated), ethnicity (Native, non-Native), and achievement (higher average, lower average) were systematically varied. Subjects provided ratings of appropriateness of type of program on five-point Likert-type scales. Recommendations for programs were influenced by student attributes. Academic programs were rated more appropriate for Native than non-Native students; commercial programs were rated more appropriate for young women; and academic programs were rated more appropriate for higher-achieving than lower-achieving students. Implications for school counseling and future research are discussed.

Every high school student is faced with decisions about program selection and occupations and careers to pursue after leaving school. Guidance counseling is a feature of high schools designed to assist with these decisions, although many Canadian and American schools lack the resources to enable every student to receive program and career advice from a counselor. In a nationally representative sample of American students, approximately 50% reported no contact with a guidance counselor when making these important decisions (Lee & Ekstrom, 1987). Students with lower academic scores and those from lower socioeconomic status homes were even less likely to receive

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counseling. However, teachers have considerable influence on students, and every high school student has contact with several teachers every day. Farmer (1985) showed that the influence of personal factors such as self-esteem and attributions on the aspirations of adolescents was mediated by environmental factors. There were gender differences, with young men more influenced by parent support and young women more influenced by teacher support in their environment.

If teachers are one of the major sources of advice and support for high school students, then it is important to know the quality and appropriateness of the advice given by teachers. This is particularly true for young women in their high school years who are more influenced by their teachers.

This study addressed the question of what kind of program advice Canadian preservice teachers would give to students as a function of specific student characteristics. The rationale for the study is based on two phenomena: occupational stratification and differential success in schools. The lives of a disproportionate number of Canadian Natives are characterized by casual or seasonal labor and frequent periods of unemployment (Department of Indian and Northern Affairs, 1980), and women are clustered in clerical and service occupations (Devereaux & Reichnitzer, 1980; Statistics Canada, 1980). Also, Natives do not fare well in our schools (Ellis, Pinacie, Turner, & Swiftwolfe, 1978; Department of Indian and Northern Affairs, 1980). Some of the causes of occupational stratification may be traced to educational decisions made in the adolescent years (Farmer, 1987; Kolbenschlag, 1979), and it is reasonable to suppose that success in school is related to decisions about the choice of school program. Teachers' advice, as we have noted, can be expected to influence these decisions. However, we do not know specifically what factors or groups of factors determine the kind of program advice given by teachers to high school students.

Studies demonstrate the relationship between student characteristics and teachers' judgments. For instance, teachers' expectations are influenced by specific student characteristics (Brophy, 1981; Brophy & Good, 1974). Recent studies have demonstrated that the gender of students influences the program expectations held for them by school personnel (Ott, Carmichael, Gallup, Lewis, Russ, & Veres, 1980). Ethnicity of students has been shown to have significant effects on expectations held by preservice and inservice teachers (Clifton, 1981, 1982, 1986; Finn, 1972; Herbert, Hemingway, & Hutchinson, 1984; Hutchinson & Hemingway, 1984). A third variable—achievement—has also been shown to be a significant influence in forming teachers' expectations of students (Benz, Pfeiffer, & Newman, 1984; Finn, 1972; Rolison & Medway, 1985). Gender, ethnicity, and achievement have each been shown to influence teachers' expectations for students. However, it is not enough to know that teachers' expectations are influenced by student characteristics; it is essential to know if these expectations translate into different kinds of program advice being given to students with different attributes.

This study investigated whether program advice given by teachers was influenced by student attributes of gender, ethnicity, and achievement, singly

and in combination. Program advice given by teachers may have a mediating influence between student attributes and occupational aspirations and accomplishments.

Method

Description of the Sample

A total of 125 student volunteers from second-, third-, and fourth-year Education classes at a university in western Canada participated in this study. The sample was 106 women and 19 men; the age of the subjects ranged from 19 to 51 years with a mean age of 24.41 years (median=21.38) and a standard deviation of 6.88 years. Teaching experience of subjects ranged from 0 to 25 years, with a mean of 1.23 years (median=0.18) and a standard deviation of 3.53 years. Twenty-four of the subjects were in secondary education, 97 in elementary, and four did not indicate type of program. The number of classes previously taken in either educational psychology or guidance and counseling ranged from 0 to 8, with a mean of 1.63 and a standard deviation of 1.45.

In a standard instruction sheet, the subjects were informed that participation in the study was voluntary, that their responses would be anonymous, and that their participation would in no way affect their course grade. They were also informed that the results of the study would be made available to them after data analysis.

Procedure

Subjects were assigned the task in group settings. They were given verbal and written instructions to imagine that they were grade 9 classroom teachers. One of their responsibilities at the end of the year was to make specific recommendations concerning their students. Each subject was asked to examine the contents of a file folder, and, by using the information therein, to respond to a questionnaire. On the questionnaire they were asked to rate the appropriateness of each of three possible education programs: academic, commercial and business, and vocational and technical. For each of these questions, the subjects' responses were recorded using five-point Likert-type scales from *very appropriate* to *very inappropriate*. Subjects were given definitions of the three educational programs. They were also asked to provide demographic information about themselves: gender, age, teaching experience, and classes taken in educational psychology, guidance, or counseling.

Each subject reviewed one case folder and responded to the questionnaire. There were 12 experimental conditions to which subjects were randomly assigned. The conditions represented all possible combinations of the independent variables in a 3x2x2 complete factorial design, that is, gender (male, female, not stated) x ethnicity (Native, non-Native) x achievement (higher average, lower average). Subjects did not know that others were responding to case folders containing different information.

Case Folders

In total 120 case folders were prepared (10 identical folders for each of the experimental conditions). The age and grade level of the individual repre-

sented in the case folder were held constant throughout (15 years, seven months; grade 9), while the independent variables were systematically varied to reflect the appropriate conditions.

The gender of the student represented in the case folder was given by direct listing; for the four "gender not stated" experimental conditions, all references to the gender identity of the student were blacked out. Ethnic identification (Native, non-Native) was provided by varying the student's last name (Stonechild, Johnston) and listing the language of the home (Cree, English). Stonechild is a common name for Cree Natives in western Canada, and Johnston is a common name for non-Natives. Although many Cree children speak English at home, the language of the home was stated in the case folder as Cree to add to the readers' impression that a student named Stonechild was definitely a Cree Native.

The level of achievement (higher average, lower average) was given by intelligence test data (WISC-R profile) and teacher-assigned final marks for grade 9. The higher average student was identified as one standard deviation above the mean for both IQ (full-scale IQ=115) and class average (75%). The lower average student was identified as having both a full-scale IQ of 85 (–1 SD) and a class average of 55% (–1 SD). On the WISC-R profile, care was taken to ensure that there were no differences in the two profiles of subscale scores (Sattler, 1974). Similarly, in assigning subject marks, care was taken to ensure that the higher and lower average students had parallel grade profiles.

Results

In this study, subjects were asked to choose the level of appropriateness for three types of school programs. The independent variables manipulated in the case folders were gender (female, male, gender not stated), ethnicity (Native, non-Native), and achievement (higher average, lower average). The results were analyzed using a four-way analysis of variance with the fourth variable (program) having correlated levels. The significance level for statistical testing was set at .05.

The means and standard deviations of the subjects' responses on the five-point Likert-type scale are reported in Table 1 (where 1=*very appropriate* and 5=*very inappropriate*). Strong ratings of appropriateness were given to the academic program for cases describing Native students and non-Native students with higher achievement: Native males with higher achievement (1.30); Native students with gender not stated and higher achievement (1.70); Native females with higher achievement (1.80); and non-Native students with gender not stated and higher achievement (1.91). A strong rating of appropriateness was also given to the vocational program for non-Native males with lower achievement (1.60). These means were all less than 2 on a scale where 1 represented *very appropriate*. Table 2 presents a summary of the analysis of variance for programs. Two main effects were significant, as were three interaction effects. The interactions are discussed first as they involved the interaction of program with the variables of interest: gender, ethnicity, and achievement.

Table 1

Means and Standard Deviations for Ratings of Appropriateness of Programs as a Function of Gender, Ethnicity, and Achievement

Student Information				Program					
Gender	Ethnicity	Achievement	N	Academic		Business		Vocational	
				M[a]	SD	M[a]	SD	M[a]	SD
Female	Native	Higher	10	1.80	0.84	2.40	0.84	3.30	0.84
		Lower	11	3.18	0.85	2.55	0.85	2.46	0.85
	Non-Native	Higher	10	2.10	0.84	2.70	0.84	3.20	0.84
		Lower	10	3.30	0.84	2.30	0.84	2.20	0.84
Male	Native	Higher	10	1.30	0.84	3.80	0.84	3.80	0.84
		Lower	10	3.70	0.84	3.40	0.84	2.60	0.84
	Non-Native	Higher	11	1.50	0.84	3.00	0.84	3.00	0.84
		Lower	10	3.70	0.84	2.70	0.84	1.60	0.84
Not Stated	Native	Higher	10	1.70	0.84	3.10	0.84	3.00	0.84
		Lower	11	3.35	0.82	3.09	0.82	2.27	0.82
	Non-Native	Higher	11	1.91	0.82	2.27	0.82	2.73	0.82
		Lower	11	3.80	0.84	2.90	0.84	2.10	0.84

[a]Means represent scores ranging from 1 (very appropriate) to 5 (very inappropriate).

Table 2

Analysis of Variance for Ratings of Appropriateness of Programs

Source of Variance[a]	DF	Mean Square	F
Gender	2	1.50	1.36
Eth	1	4.52	4.08*
Gender X Eth	2	2.28	2.06
Ach	1	6.51	5.89*
Gender X Ach	2	1.41	1.27
Eth X Ach	1	.04	.04
Gender X Eth X Ach	2	.61	.55
Error 1	111	1.11	
Program	2	1.64	2.07
Gender X Program	4	2.66	3.36*
Eth X Program	2	3.72	4.70*
Gender X Eth X Program	4	.54	.68
Ach X Program	2	62.07	78.45*
Gender X Ach X Program	4	1.69	2.14
Eth X Ach X Program	2	.07	.09
Gender X Eth X Ach X Program	4	.20	.25
Error 2	222	.79	

*$p < .05$

[a]Code: Gender = gender of stimulus person; Eth = Ethnicity (Native/Non-Native); Ach = Achievement (higher/lower)

The gender by program interaction was significant $F(4,222)=3.36$, $p<.05$. Post hoc analysis using the Newman-Keuls procedure showed that 29 of the 36 differences were greater than the critical values for significance. The means of the three gender groups (male, female, not stated) for each program (academic, business, and vocational) are presented in Table 3 and Figure 1. Examination of these data demonstrates that the business program was judged the most appropriate for women (with the lowest rating of the nine combinations where low numerical rating represents high judgment of appropriateness). Conversely, the business program was judged as least appropriate for men; it obtained the highest numerical rating of the gender by program combinations. Figure 1 indicates less striking differences in ratings of appropriateness of academic and vocational programs on the basis of gender.

The second significant interaction was ethnicity by program $F(4,222)=4.70$, $p<.05$. A Newman-Keuls analysis showed that all 15 comparisons of means yielded significant differences greater than the critical values. Table 4 and Figure 2 demonstrate that the academic program was seen as most appropriate for Native students, with the business and vocational programs judged less appropriate for Native students. Conversely, the academic program was perceived to be less appropriate for the non-Native students described in the case folders, and the business and vocational programs were judged more appropriate for the non-Natives.

Achievement by program was the third significant interaction, $F(2,222)=78.45$, $p<.05$. Post hoc analyses (Newman-Keuls) showed that 14 of the 15 differences between means exceeded the critical values. The means appear in Table 5. This interaction between achievement and program is shown graphically in Figure 3. The academic program was judged most appropriate for higher-achieving students with the most extreme mean of the study (1.73 on a scale where 1 represents *very appropriate*). At the other extreme, lower-achieving students received a mean of 3.53 for appropriateness of academic programs, thus indicating that the preservice teachers judged academic programs inappropriate for lower average achievers in this study. Business was judged equally appropriate for both groups of achievers,

Table 3
Means for Ratings of Appropriateness of Programs
for the Gender X Program Interaction

Gender	Program		
	Academic	Business	Vocational
Male	2.56	3.16	2.84
Female	2.60	2.49	2.79
Not Stated	2.74	2.84	2.53

Note: Means represent scores ranging from 1 (very appropriate) to 5 (very inappropriate). The lower the mean, the stronger the rating of appropriateness.

Table 4
Means for Ratings of Appropriateness of Programs
for the Ethnicity X Program Interaction

Ethnicity	Program		
	Academic	Business	Vocational
Native	2.54	3.06	2.91
Non-Native	2.73	2.60	2.43

Note: Means represent scores ranging from 1 (very appropriate) to 5 (very inappropriate). The lower the mean, the stronger the rating of appropriateness.

Table 5
Means for Ratings of Appropriateness of Programs
for the Achievement X Program Interaction

Achievement	Program		
	Academic	Business	Vocational
Higher	1.73	2.83	3.13
Lower	3.53	2.82	2.21

Note: Means represent scores ranging from 1 (very appropriate) to 5 (very inappropriate). The lower the mean, the stronger the rating of appropriateness.

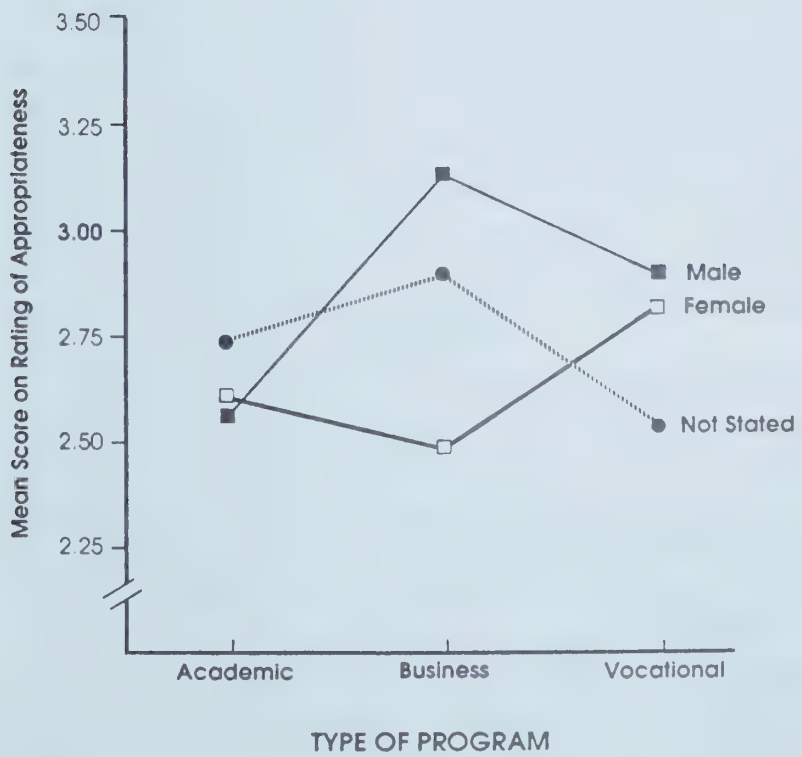

Figure 1: Gender x program interaction

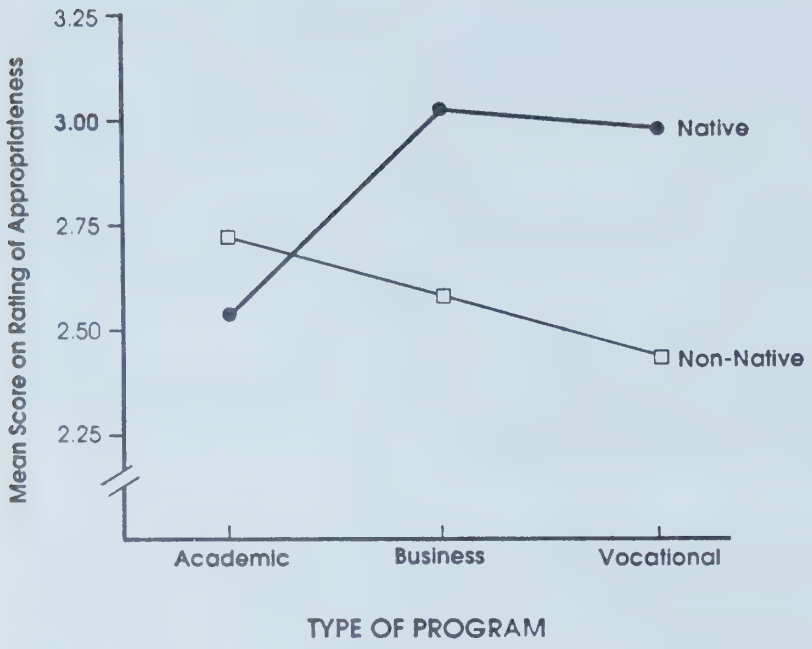

Figure 2: Ethnicity x program interaction

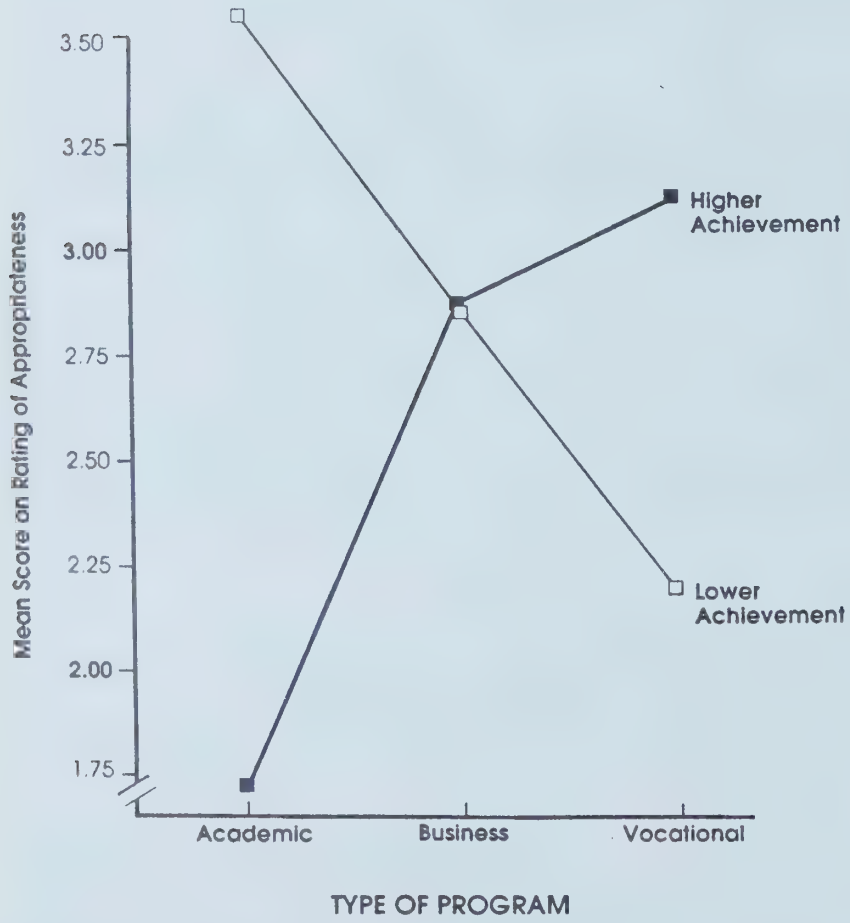

Figure 3: Achievement x program interaction

and the data for vocational programs were opposite to the academic program judgments, though the differences were less extreme (Figure 3).

The two significant main effects were for ethnicity and achievement (Table 1), with programs judged as more appropriate overall for Native and higher-achieving students. However, these main effects may be attributed to particular significant interactions that have already been discussed.

Discussion

In this study we report the effects of gender, ethnicity, and achievement on preservice teachers' judgments of the appropriateness of three programs for students described in case folders. Limitations of the procedure and the subjects who participated should be noted. The need to manipulate orthogonally and to control each of the independent variables in this study dictated the use of simulated case histories. While this experimental procedure is widely used, it does have drawbacks. Possibly preservice teachers would make different decisions when interacting with students in the classroom than when reading about fictitious students. Also, their recommendations might change over the time of their contact with the students (Dusek & Joseph, 1983). These questions will remain unanswered until a number of studies have been conducted in classrooms.

Two important considerations concerning the subjects who participated in this study should be noted. First, most of the subjects had no previous full-time teaching experience; it would be unwise to generalize these results to experienced Canadian teachers without confirmation that experienced teachers provide similar responses. Second, the majority of these subjects were women. Because most Canadian high school teachers are men, this sample did not accurately reflect the characteristics of the population to which we wished to generalize. The subsample of men was too small to allow for separate analysis; consequently, the question of the influence of subject gender has not been addressed. Although the two preceding considerations caution against generalizing these results to other groups without further study, the findings are decisive and surprising enough to warrant both concern and future research. The studies of Smith and Hemingway (1987a, 1987b, 1987c) have begun this process by using a sample of experienced secondary teachers that closely approximates the gender ratio of the population of high school teachers in western Canada. Their results corroborate the findings of the present study.

The finding that preservice teachers' judgments about the appropriateness of particular programs were influenced by gender, ethnicity, and achievement supports and extends previous research. The interaction of gender and program illustrates the continued existence of the traditional stereotypes found in other studies (Oregon Department of Education, 1981; Ott et al., 1980; Picou & Howard, 1976; Russell, 1978; Smith & Hemingway, 1987a, 1987b, 1987c). Subjects in this study rated as most appropriate the commercial program for young women, while the same program was rated as least appropriate for men. Recommending commercial programs for young men or for those students whose gender was not stated was something these subjects were not generally prepared to do. They demonstrated in their

ratings that gender-roles are an important determinant of appropriateness-of-program recommendations.

Preservice teachers in this study found the commercial program to be a more appropriate recommendation for young women. Young women are particularly influenced by their teachers' recommendations (Farmer, 1985) although they think that their program choices are not influenced by teacher advice (Gaskell, 1987). They may be most limited by advice and least aware of the source of the limitations as external to them. Clerical occupations of low status and low pay commonly follow from commercial programs in high school (Menzies, 1981), and women frequently find themselves limited to these positions (Conway, Bourque, & Scott, 1987; Gaskell, 1987; Marini & Brinton, 1984; Reid, 1981). If the findings of the present study are supported by additional research, an important factor in promoting occupational stratification by gender may have been identified.

Preservice teachers' program recommendations were influenced by the ethnicity of the student described in the case file. For the Native students, the program seen as most appropriate was the academic program, followed by the vocational program, and business was seen as least appropriate for this ethnic group. Conversely, the academic program was seen as least appropriate for the non-Native students, with the vocational program viewed as most appropriate for the non-Native students described in the case files. Native students tend to leave school before completing high school, and those who do finish a secondary program rarely complete the academic program (Vernon, 1984). Perhaps in light of the paucity of Native adolescents thriving in western Canadian high schools, the subjects chose to encourage these relatively successful Native students to pursue academic goals. The Native students described may have been seen as outstanding for this reference group. This might be interpreted as reverse discrimination because non-Native students with the same sets of scores were viewed as more appropriate candidates for vocational and business programs than for academics. These data suggest that educators may advise Native students to enroll in academic studies; however, these data say nothing about educators' willingness to create the classroom conditions necessary for Native students to succeed (Kleinfeld, 1975). Advising Native students to enroll in academic programs may need to be accompanied by research on variables that intervene between ethnicity and academic achievement (e.g., Clifton & Roberts, 1988).

Program recommendations were influenced by achievement, with higher-achieving students seen as more appropriate for academic programs and lower-achieving students for vocational programs. Two combinations were deemed to be absolutely inappropriate, with a mean greater than three: higher-achieving students in vocational programs, and lower-achieving students in academic programs. Because achievement data used in this study represented lower and higher average students, but not extremely low and high students, it is surprising how clearly the teachers differentiated between the two levels of achievement. The influence of achievement data on preservice teachers' program recommendations extends earlier findings of the influence of achievement on teacher expectations (e.g., Benz et al., 1984) and

teacher decisions about placement for elementary students (e.g., Hutchinson & Hemingway, 1984).

In summary, the findings of the present study suggest that teachers' program advice to students may be influenced by gender, ethnicity, and achievement. If teachers frequently advise adolescents about program selection in the absence of counselors (Lee & Ekstrom, 1987), then students who are influenced by this advice may make course selections that inappropriately limit their career aspirations and accomplishments. Teachers need to be informed of the counseling influence they may exert on their students and the potential for bias based on student attributes such as gender and ethnicity. Advice given to students may be a factor contributing to occupational stratification. Research is needed to continue the investigation of variables that mediate between attributes such as ethnicity (Clifton & Roberts, 1988) and gender (Farmer, 1987) and outcomes like occupational aspirations and accomplishments.

Note

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